

AGRICULTURE IN KYRGYZSTAN: GROWTH ENGINE OR SAFETY NET?

Miles K. Light*

University of Colorado
(Miles.Light@Colorado.edu)

Summary

At the center of the Kyrgyz growth story is agriculture. Statistics show that one in two workers employed in agriculture, and that 30 percent of GDP still comes from agricultural activities, Kyrgyzstan's growth is clearly linked to this sector. Successful land-reform policies converted agriculture into an engine for growth during the late 1990's, leading to a robust economic expansion. But since 2001, growth in agriculture, as well as the overall economy, has slowed – and many households turn to farming as a social safety net, rather than a business. The early success and subsequent challenges facing the agricultural sector reveals the broader issues related to government policy and economic outcomes in Kyrgyzstan.

The Kyrgyz case shows that no single policy can guarantee sustained growth over the long run. Market liberalization has re-allocated resources efficiently -- most labor and capital resources are now allocated to their best use. But the growth-effect was a transient, rather than a permanent shift in development. Free market policies must now be accompanied by strong institutions that foster investor confidence. The new challenges are institutional: rule of law and contract enforcement have become the new constraints to sustained growth.

The study also finds that weak governance and rent-seeking activities have discouraged the transition from small-scale farming to business-based farming. Although small-scale farming can be as productive as large-scale farming in many regards, there still exist important economies of scale in agricultural support services. For example, transportation and marketing services are necessary for Kyrgyz goods to reach international markets. These services require large-scale container load-sizes which cannot be supplied by small-scale farmers.

The physical challenges of shipping goods to market also reveals how trade liberalization policies, such as WTO accession, are not effective in the presence of “hard” constraints like transport and transit costs. As a result, WTO accession and other trade-liberalization policies have done little to increase agricultural exports or economic growth. Improved

* This study was funded in part by Europe and Central Asia Economic Management and Poverty Reduction Department, the World Bank as part of the ongoing Country Economic Memorandum. Specific thanks to Ekaterine Vashakmadze, Damir Esenaliev, Natalia Pisareva, Roland Clarke for their guidance and to Homi Kharas and Maurizio Guadagni for their valuable comments. The Kyrgyz Republic World Bank Country office provided important research and support services during the project. Any errors or omissions are the responsibility of the author.

marketing and transport services, including trans-shipment through neighboring countries, is needed before the benefits of WTO accession can be fully realized.

As staple food prices increase sharply in China and Russia, Kyrgyzstan's agricultural engine for growth may drive the economy once again. But unless Kyrgyz farmers can expand operations and access regional markets, the sector will remain in its secondary role – as a social safety net.

TABLE OF CONTENTS

TABLE OF CONTENTS	3
LIST OF FIGURES.....	3
1 INTRODUCTION.....	4
2 KYRGYZ ECONOMIC GROWTH: 1990 -- 2006.....	7
2.1 KYRGYZ GROWTH: 1990-2001.....	7
2.2 KYRGYZ GROWTH: 2001-2006.....	9
3 THE DUAL-IMPACT OF LAND REFORMS.....	10
3.1 AN ENGINE FOR GROWTH	10
3.2 AGRICULTURE AS A “SAFETY NET”.....	11
3.3 LAND REFORM RESPONSE IN CONTEXT.....	12
4 INVESTMENT AND PRODUCTIVITY IN KYRGYZSTAN.....	15
4.1 PRODUCTIVITY IMPROVEMENTS.....	15
4.2 MARKET FAILURES AFTER TRANSITION.....	17
4.2.1 <i>Contract Enforcement</i>	17
4.2.2 <i>Poor Investment Climate</i>	18
4.2.3 <i>Risk and Profitability for Small-Scale Farmers</i>	20
5 EVOLUTION OF INDUSTRY AND INSTITUTIONS.....	21
6 DISTANCE, GEOGRAPHY, AND THE WTO	24
7 KYRGYZ PROSPECTS FOR SUSTAINED GROWTH.....	26
REFERENCES.....	27

LIST OF FIGURES

FIGURE 1: POST-REFORM SECTORAL GROWTH IN KYRGYZ REPUBLIC	8
FIGURE 2: SLOWING GROWTH:	8
FIGURE 3: AGRICULTURE AND OVERALL GDP	10
FIGURE 4: SOURCES OF HOUSEHOLD INCOME IN RURAL AREAS, 1997	12
FIGURE 5: RESPONSE TO LAND REFORM	13
FIGURE 6: REVENUES PER WORKER FOR A SELECTED GROUP OF COUNTRIES, 2001 . ERROR!	
BOOKMARK NOT DEFINED.	

1 INTRODUCTION

Kyrgyzstan is a mountainous, land-locked country situated between the Tien Shen and Pamir mountains of Central Asia. The country's remote location presents formidable geographic and social barriers to economic growth. Despite these challenges, the country succeeded to spur economic growth at rates higher than six percent per year during the late 1990s, even through the Russian financial crisis. The engine behind this growth was agriculture, a sector that was aggressively liberalized after independence.

Compared to other countries in Central Asia, Kyrgyzstan was the first to liberalize economic markets, allow free speech, and promote free elections. These activities accelerated the economic transition by reallocating labor and capital resources away from Soviet factories and plants into slightly more viable labor-intensive activities, such as agriculture and local services. The result of these policies was a sharp increase in agricultural output between 1995 and 2001. Farmers and their families flocked to the fields to produce wheat, hay, fruits and vegetables, sugar beets, and cotton. Traditional soviet outputs, such as tobacco, declined. The agriculture sector's growth was unique in Central Asia, and was hailed as the reward to western-style free market policies.

But by 2002, agricultural growth began to slow, and by 2006 the sector became a drag upon the economy. How could the engine of Kyrgyzstan's growth, which employs 50 percent of the workforce, have slowed so dramatically? Some suggest that land utilization was near capacity, or that the small local markets had become saturated with locally produced goods, bringing down local prices, or that over one-half of the Kyrgyz workforce was already engaged in farming activities, which lowers the marginal product of new labor.

This paper shows that although each individual factor played a role in the slowdown, the agriculture story has a second dimension. In addition to driving overall economic growth, the sector has also simultaneously provided a "social security" system for the unemployed and elderly. In the presence of a weak government, it implies that subsistence farmers will continue to choose a production structure that emphasizes food security as the first priority, and profit-maximization as a secondary concern.

Labor and capital resources were re-allocated more efficiently during the 1990's, which pushed the agriculture sector much further toward the production possibilities frontier. The reallocation spurred growth temporarily, but continued growth after the 1990's would require the entire production possibilities frontier to shift out, either through higher productivity, higher domestic demand, or by expanding sales to foreign markets. Unfortunately, these elements failed to materialize. Instead, poor land-stewardship has led to lower soil-quality and poorly-maintained roadways have stemmed the flow of exports. At the same time, a shady business environment has discouraged international investors from building new agro-processing plants.

The deteriorating market environment and lower incomes fostered discontent, and by 2005, the populace revolted, culminating in a 5-day revolution that forced the standing

president to flee, and led to political and economic turmoil. The political landscape remains uncertain, with continued unrest and frequent political turnover.

The Kyrgyz case demonstrates how some popular growth-strategies should be re-considered. For example, the traditional “laize-faire” strategy, that assumes market liberalization and free competition alone will lead to sustained growth has only been partially effective for Kyrgyzstan, the benefits were transitory, and not permanent. We also show how market failures in developing and transition countries are distinct from the developed world. Large distortions for business investment still exist, despite macroeconomic stability and free trade. In general, three types of conditions have emerged as the key catalysts for investment, productivity, and growth. These are discussed next.

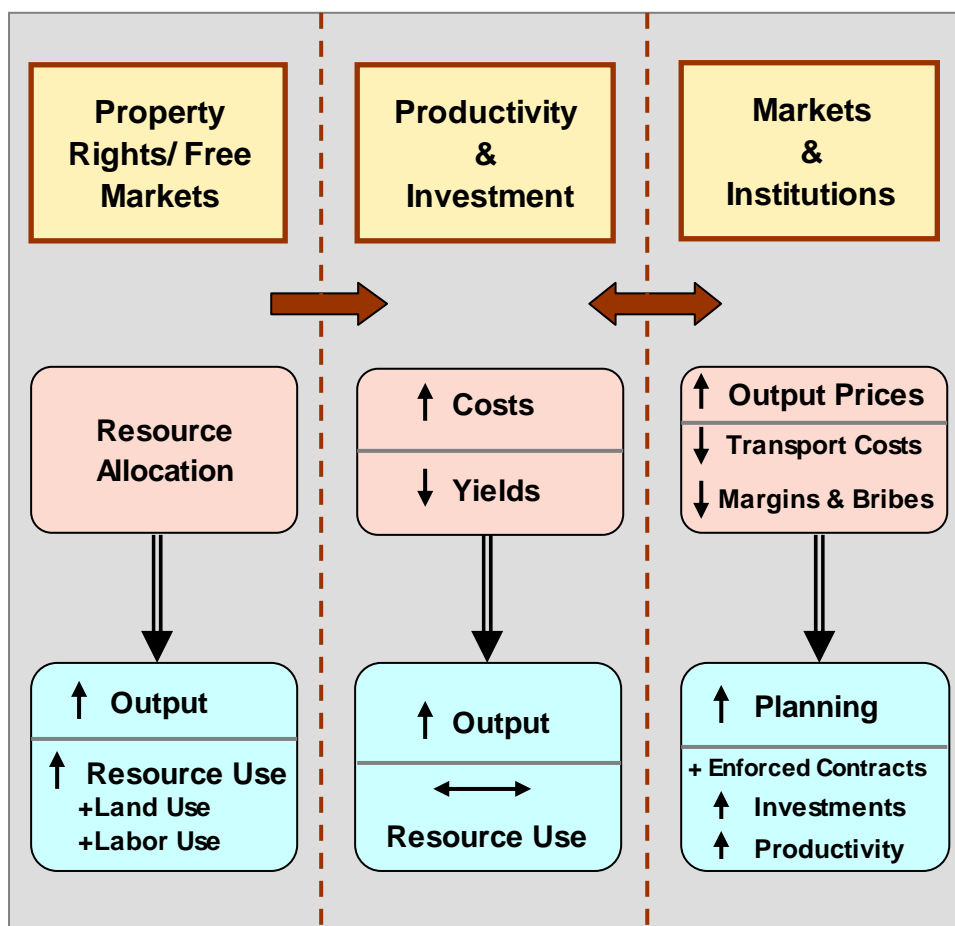
Three Conditions for Growth in Kyrgyzstan:

The Kyrgyz case shows that no single policy works in perpetuity. Different policies are needed as the economy evolves. These are free markets, investment and productivity, and strong institutions:

- *Free markets / Property Rights:* Prices must be free to reflect the relative scarcity for goods and factors of production. And ownership must be clear and certain before there is an incentive to maximize output and minimize costs. This is a precursor to economic growth. The transition to free markets generated a *transitory growth* episode, as factors of production are re-allocated toward more productive activities. But free markets on their own, cannot ensure sustained growth, because they do not guarantee innovation and entrepreneurship.
- *Productivity / Investment:* When factors of production are allocated efficiently, higher output comes from either from increased productivity or from factor accumulation. For the Kyrgyz farmer, higher productivity comes from investment in fertilizer, seeds, dairy cooling equipment, better breeding and vaccines. However, investment cannot be forced, investors must be enticed by the prospect of high, sustainable profits.
- *Efficient Markets / Institutions:* Investor confidence requires credible markets, enforceable contracts, and strong institutions. Investment in Kyrgyzstan is lacking because of high transactions costs, high transport costs, and lack of trust. Expected profitability can be increased via efficient markets or from improved institutions. For example, Figure 1 shows the inter-connected nature of these conditions graphically.

The first column shows that market liberalization facilitates efficient resource use, and increases output, but it does not impact crop yields or overall cost. The middle column, investment and productivity, requires free markets to send price signals to investors and businesses. For example, high prices for wheat or potatoes will spur investment in fertilizer and equipment, leading to higher yields per acre, and lower costs per unit. The third column shows how institutions impact investment. Weak institutions change the *perceived* profitability from investment. For example, if farmers face the prospect of increased bribes or hassles from the government, then they may be reluctant to invest and grow, choosing instead to maintain a low profile and continue subsistence-style farming.

Figure 1: Three Inter-related Conditions for Growth in the Agriculture Sector of Kyrgyzstan



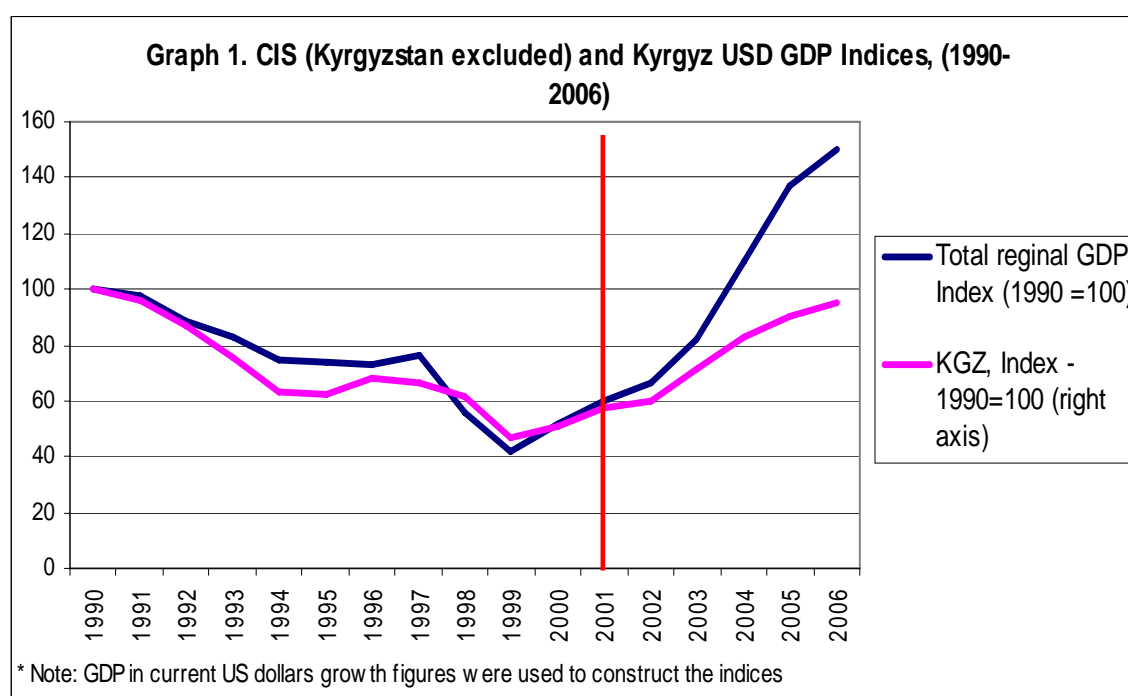
Source: Author

Among the three conditions in Figure 1, market liberalization is the easiest to accommodate, and is also a pre-requisite for the other two conditions. Conditions two and three are more difficult to provide in developing countries because of limited budgets and a weak civil service corps. These conditions are also not necessary, if the government is content with moderate levels of economic growth. Kyrgyz leaders appear to be less concerned about long-term growth, and more concerned about the allocation of current resources.

2 KYRGYZ ECONOMIC GROWTH: 1990 -- 2006

The developments in Kyrgyzstan after 1990 support Todaro's (1970) theory of unemployment and migration. The large contraction of manufacturing and high urban unemployment led to large-scale rural migration. In this respect, the agriculture sector is both a component of the economy, and a reflection of economic prosperity. The gains in this sector between 1995-2001 were a clear response to land-privatization, but the sector gains also reflect the fact that there was nowhere else for Kyrgyz people to work.

Figure 2: Kyrgyz GDP performance before and after 2001

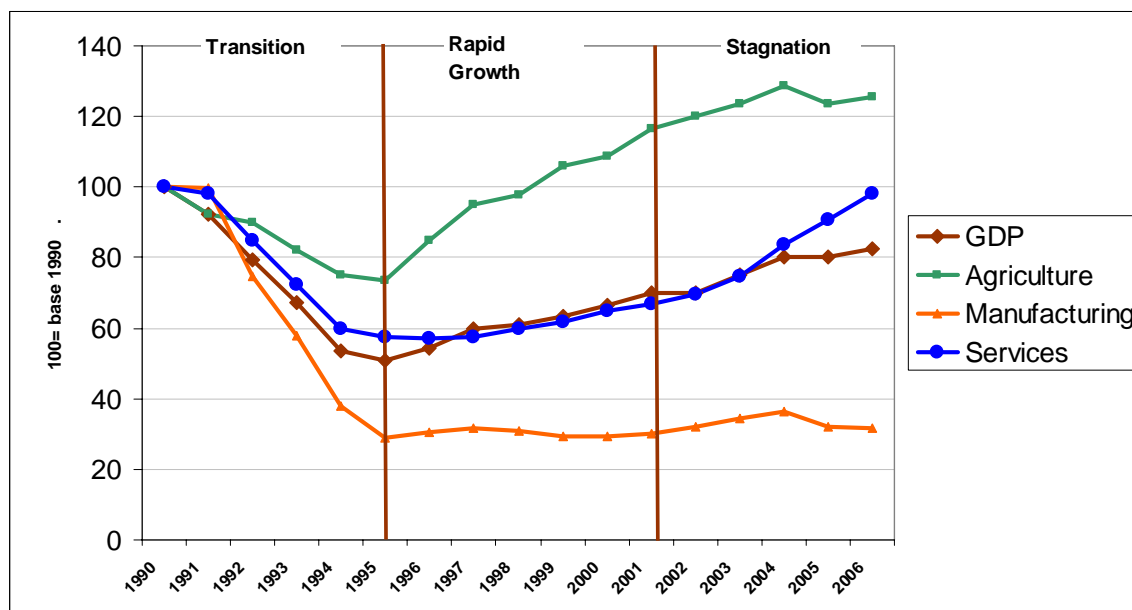


2.1 Kyrgyz Growth: 1990-2001

Following the collapse of Soviet Union, the Kyrgyz industrial complex eventually shut down along with several other post-Soviet economies. When the centrally-planned purchasing and distribution system ended, markets in these countries were forced to develop on their own. But unlike some Eastern European countries, such as Hungary and Slovenia, Kyrgyzstan did not have neighbors with strong market economies. And unlike China, Russia, or Vietnam, Kyrgyzstan has no sea-ports to connect with world markets.

The result was a period of relative autarky after independence, which provided an easier transition for producers, because they were protected from global competition, but which also slowed the pace of recovery when compared to Eastern and Central Europe. Figure 2 shows how GDP fell by 50 percent over the first five years, as almost all industrial activity halted. Growth after 1995 was relatively robust, but still slow compared to many European or Asian transition countries.

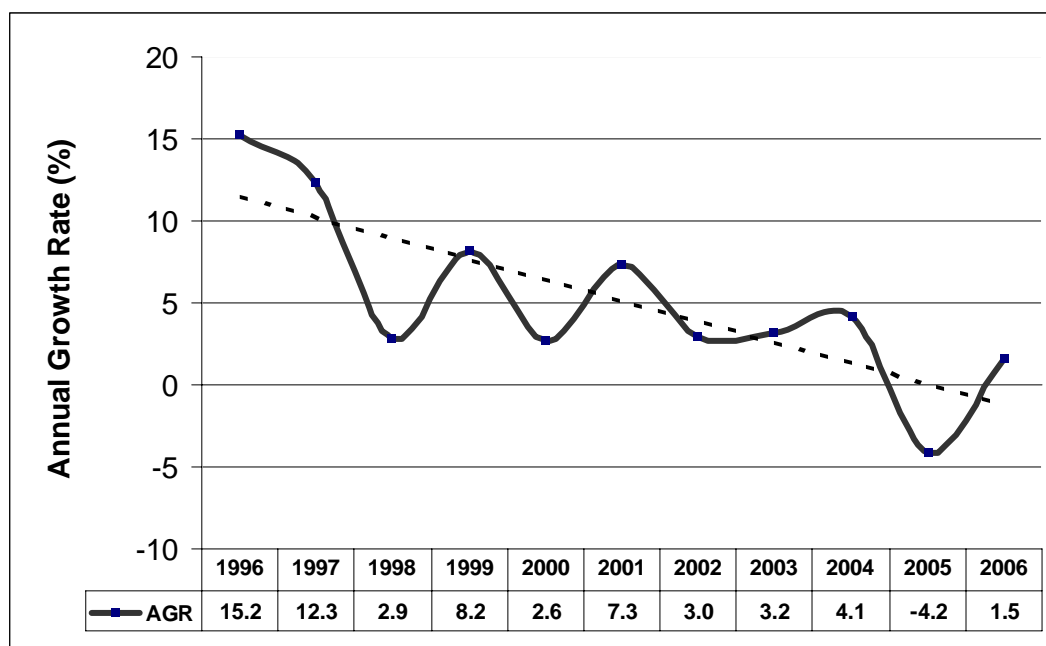
Figure 3: Post-Reform Sectoral Growth in the Kyrgyz Republic: Agriculture Grows Quickly, then Slows



Sources: Kyrgyz National Statistical Committee and World Bank staff calculations.

The agriculture sector was the engine for growth between 1995-2001. Figure 3 above shows that during the 10-year period after independence, only agriculture managed to recover beyond pre-1990 output levels. Manufacturing and other sectors languished at levels 80-90% below their pre-1990 benchmark. During the period from 1995-2000, the agriculture and agro-processing sectors grew at an average rate of 9.5% per year.

Figure 4: Slowing Growth: Agriculture’s rate of growth has been declining since 1996. Since 2002, the rate of growth has been lower than the overall economy, making the agriculture sector a drag upon growth, rather than an engine for growth.



Source: Kyrgyz National Statistical Committee, Statistical Yearbook, 2007.

2.2 Kyrgyz Growth: 2001-2006

But by late 2001, growth in the agriculture sector began to subside. The factors that contributed to rising outputs, such as intensive farming and rotation to high-value crops helped the sector's transition to a market economy. But new problems began to arise, such as soil degradation and a diminishing marginal product of labor. Figure 4 below shows the annual growth rate for agriculture between 1996-2006. Growth rates were as high as 15 percent per year during the late 1990's, but then steadily declined to below 5 percent growth after 2001, and even turning negative during the political revolution of 2005.

After 2001, with land and labor resources fully-utilized in agriculture, further growth would require increased labor *productivity*, either by adopting better (and higher cost) planting technology, or by increasing the agriculture capital stock – both of which require investment. The next section describes why labor productivity has not improved, despite strong growth in the agricultural sector.

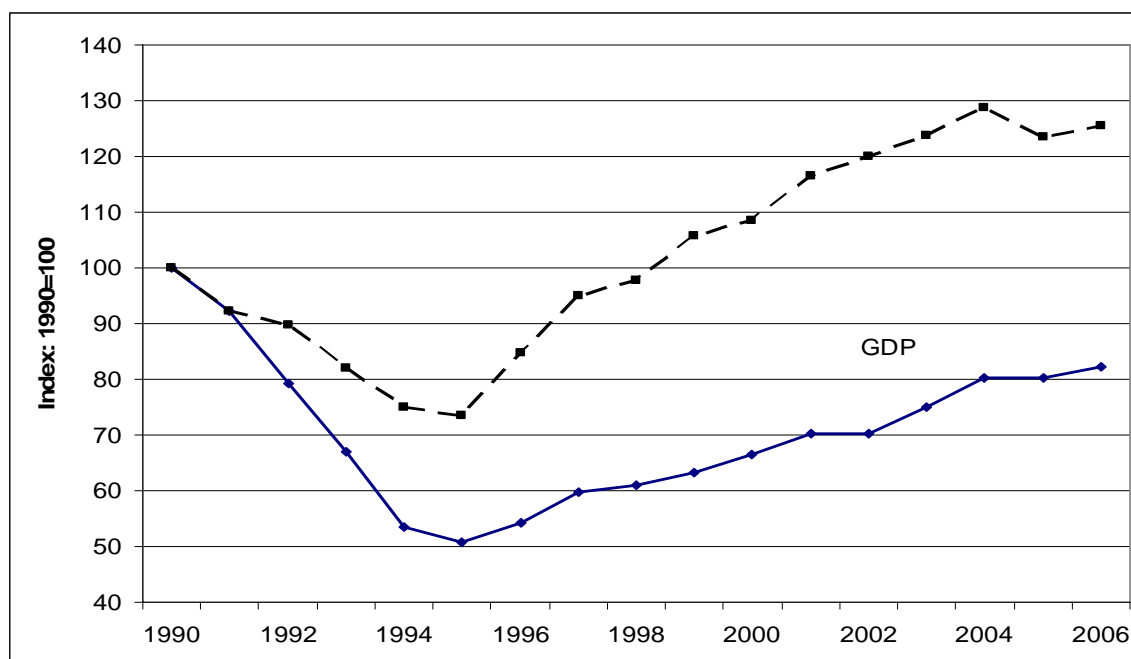
3 THE DUAL-IMPACT OF LAND REFORMS

Land reform in the early 1990s was the catalyst for overall economic growth in Kyrgyzstan, but a second, more important effect of the newly-privatized land was its role as a *social safety net*, which was sorely needed in the presence of a weak government. We explore land reform's dual role in shaping the Kyrgyz economy between 1991 and 2006.

3.1 An Engine for Growth

The pace and depth of land reform in Kyrgyzstan was the most aggressive in Central Asia (see Box 1 below). In February 1991, the Kyrgyz government passed laws that allowed local councils to create peasant farms. And by 1994, approximately 10,000 private farms were created, leading up to the “watershed” year, between 1994-1995, when the Kyrgyz government aggressively distributed farmland to all household types. Although holdings were initially considered to be *leased* for 99 year periods, this approach was replaced by outright ownership in 1998. With land holdings and farming decisions in the hands of individuals instead of the government, output surged compared to neighboring countries, where production was still being centrally-planned. Figure 5 shows how agriculture helped increase overall GDP in Kyrgyzstan during the late 1990's.

Figure 5: Agriculture and Overall GDP in Kyrgyzstan: An Engine for Growth



These individual farmers shifted toward labor-intensive crops, such as potatoes, bell peppers, and berries, and they tilled their land more intensively than before. For example, potato and root output increased from 13.7 tons per hectare in 1996 to 18.4 tons per hectare in 2003. Similarly, grain productivity almost doubled, from 1.9 tons to 2.8 tons per hectare. Higher output per unit of land increased farm incomes enough to support families, and over time, this sector has become the country's de-facto welfare system.

Box 1: Land Reform in Central Asia

Kyrgyzstan was the first country in Central Asia to provide individual farming plots, it was also the first country to undertake serious land reform. The table below shows the Kyrgyz privatization strategy together with other Central Asian countries.

Differences in implementation of land reform in CIS				
Region	Allocation strategy	Transferability	Farm organization	Reform Year
Central Asia				
Kyrgyzstan	Plots	Buy/sell, lease	Corporate + individual	1994
Kazakhstan	Shares	Buy/sell, lease	Corporate + individual	2003
Turkmenistan	Leasehold	None	Individual leaseholds	1998
Tajikistan	Leasehold	Use rights	Individual leaseholds within corporate farms	1999
Uzbekistan	Leasehold	None	Individual leaseholds	2004

** Taken from Zvi Lerman "Productivity Trends in the CIS (Draft 4)" Nov. 28, 2006.

3.2 Agriculture as a "Safety Net"

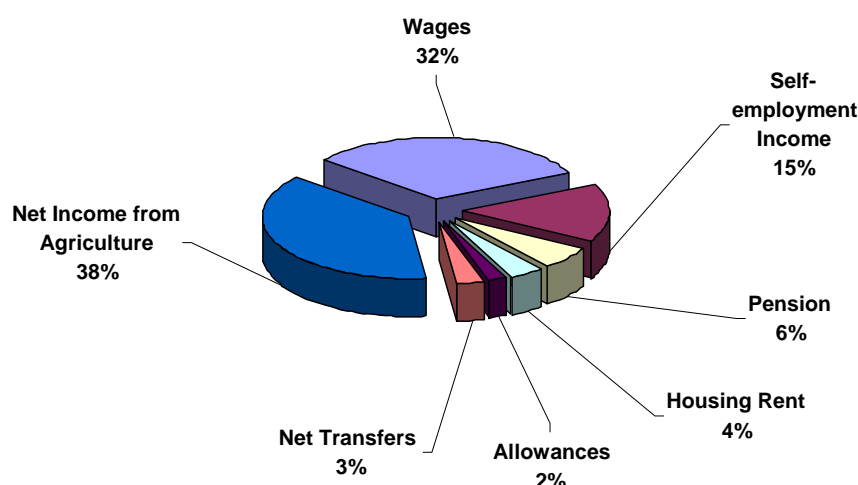
The closure of factories across the country led to a significant wave of unemployment and urban to rural migration. At the same time, small-scale family farms were being formed as part of the land reform process. The result was that 17 percent of the labor force shifted into farming full time, and more workers tilled the land as a second, informal job.

The move to small-plot farming has been recommended as a low-cost means to support the poor and unemployed. For example, Lerman and Schreinemachers (2005) support the notion of highly-individualized agriculture, despite possible inefficiencies:

These conclusions lead to a clear policy advice to transition countries, and especially to CIS: as long as non-agricultural employment opportunities in towns and in rural areas remain undeveloped, land policies should be aimed to encourage individualization of agriculture. Very small individual farms may be inefficient (although the jury is still out on this question), but at least they provide employment and food – a basic safety net that the rural population desperately needs in the absence of adequate unemployment-benefit programs in transition countries. (Individual Farming as a Labor Sink, pp 682.)

Whether through higher employment in agriculture or higher unemployment in manufacturing and other nonagricultural activities, there is no question that a large proportion of the Kyrgyz population depends on agriculture as its main source of income. Figure 6 illustrates that most income—38 percent—came from own consumption and sale of agricultural products, while wage income represented only one-third of household income in 1997.¹

¹ World Bank staff calculations based on the results of the 1997 household survey carried out by the National Statistical Committee.

Figure 6: Farming State: Sources of Household Income in Rural Areas, 1997

Agriculture's role as a labor-sink precipitated the migration of Kyrgyz workers from urban areas back to village life, and led to numerous small-scale operations. But this response contrasts markedly with other CIS countries. For example, Hungary, Poland and other ECE countries became increasingly urbanized, as did Russia, Ukraine and Belarussia. In the next section we review three very different responses to land reforms. Important differences arise because of starkly different initial conditions, but also because of the differences in timing and supporting markets for agricultural inputs and outputs.

3.3 Land Reform Response in Context

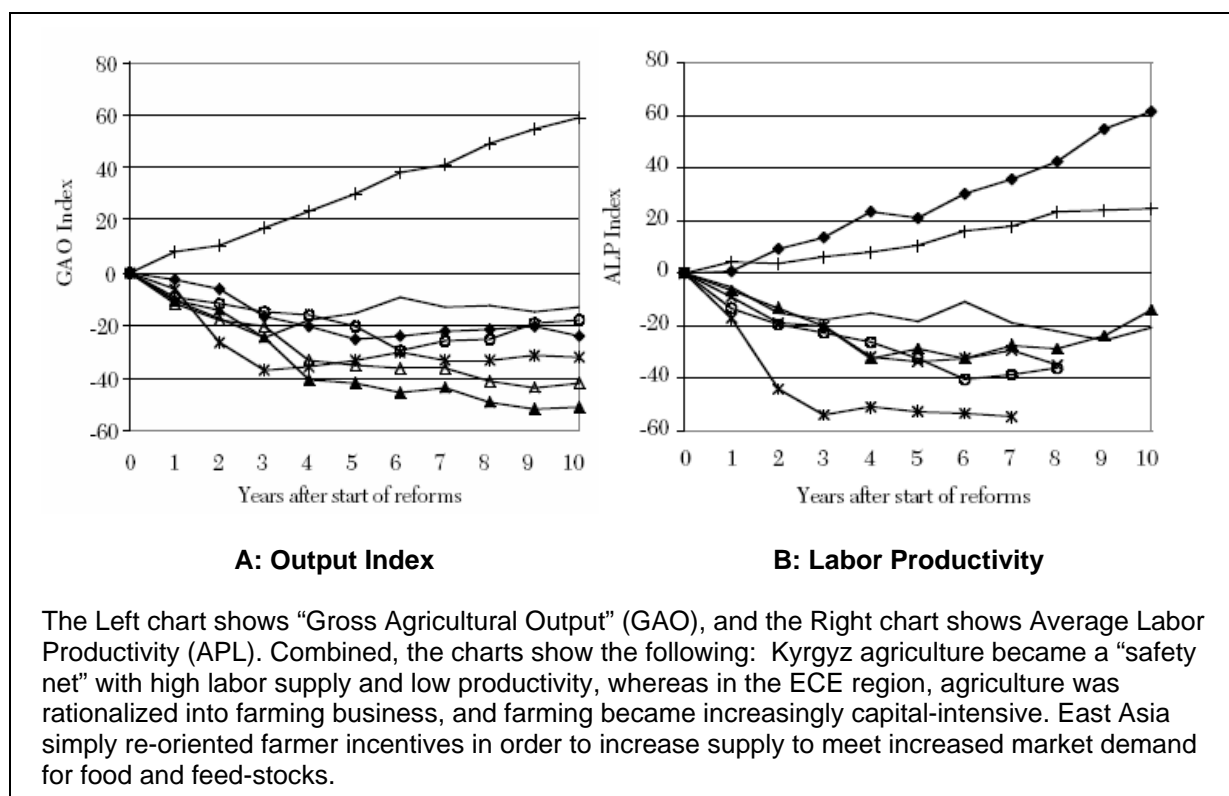
The surprising rush to small-plot farming, despite low output prices and low productivity can be explained by placing the Kyrgyz experience in the context of other transition countries. Rozelle and Swinnen (2004) show how specific policy differences have driven very different responses to land reform. Each country's response depends upon the pre-existing structure of supply and distribution markets, upon the opportunities outside of farming, and upon the proximity to large, competitive agricultural markets.

Figure 7 shows how land output and labor productivity vary across different transition countries. Three country groups emerge: East Asia (China and Vietnam), who liberalized land output only, leaving the related input supply and output sales structure unchanged and under government control; Eastern and Central Europe, where land was liberalized along with most other aspects of the economy, but where traditions remained tied to Europe rather than Russia; and finally, the CIS countries where land use and all related agricultural services were liberalized simultaneously – sometimes called “shock therapy” by economic consultants at the time. Under *shock therapy*, all markets were liberalized simultaneously. The complete dismantling of input supply channels and distribution markets were not necessarily pre-meditated policies. These policies were the result of weak governments who lacked the necessary resources to ensure a more gradual transition.

The most obvious difference between countries is the output response. Figure 7 shows how output in Eastern and Central Europe (ECE) countries declines precipitously, along with all of the other CIS states. In contrast, output in China and Vietnam increased steadily during the years after initial reform. The positive response in East Asia occurs because output prices increased compared to pre-transition levels, but input prices remained

constant. After providing a pre-determined quota, East-Asian farmers were allowed to sell surplus food stocks at market prices – which were substantially higher than the government price. Price liberalization in the ECE and CIS countries was the opposite of East Asia. Output prices fell and input prices rose compared to the pre-reform periods – the result was a significant initial decline in production. But output only explains part of the story. Labor supply and farm-rationalization taken together explain the more long-term changes to productivity and income.

Figure 7: Response to Land Reform



Labor Supply Response: Chinese and Vietnamese farms responded to the reform by increasing labor supply; the ECE region responded with sharp reductions in labor supply, whereas in Central Asia and the Caucasus countries labor supply rose sharply. The response in East Asia and Central Europe follow standard economics, that higher or lower prices lead to increasing or decreasing output. The change in output consequently lead to increased or decreased labor demanded in the agriculture sector. In Asia, where controlled prices were below market – liberalization led to higher prices and increased supply. Higher labor supply followed as a result. In Eastern Europe, labor supply decreased as the relatively inefficient state-farms were dismantled and returned to their previous owners. Unlike the land-allocation systems in Central Asia, where small plots were allocated to each individual, the Central Europeans owned large sections of land which facilitated mechanized, large-scale farming technology. As a result, rationalization in the ECE led to lower labor demand as profit-maximizing farmers cut costs and as imports replaced domestic supply.

In Kyrgyzstan, the supply response is more complicated. Despite lower prices and lower output, labor supply increased significantly. Even though agriculture prices fell compared to pre-1990 levels, farming became the only viable employment option for most citizens.

These workers decided that it was better to farm on a small peasant parcel, eating part of the output and selling the surplus, than to remain unemployed in urban areas.

Productivity Response: Farming productivity was directly impacted by each region's labor supply response. In China, output and labor productivity are much higher than before the reforms. In the ECE countries, agriculture was *rationalized* into a profitable industry, where farms are mechanized and labor-productivity is high. In Central Asia, farming became a social-safety net, where unemployed workers could make subsistence living, and where they could wait until better opportunities arose. Even though land-productivity rose² as workers tilled their land more intensively, labor productivity *fell* as the addition of new farm-workers eventually lowered the marginal product of labor.

Thus, the land reforms in some CIS countries converted the agriculture sector into a *social safety net*, where small-scale farmers subsist from the food they grow and sell the surplus. Labor productivity could be increased if the sector became more *rationalized*, but the typical Kyrgyz small-plot owners are unwilling to sell their plots, because they risk starvation and displacement without some other type of public safety net. These small peasant farmers are also reluctant to take risks with new crops, seeds, or fertilizers -- because the consequences of a single bad year are more dire for an individual without access to credit. But because increased labor productivity is the only avenue to sustained growth in agriculture, these farmers must begin to make investments in better farming technology and higher-quality inputs if they wish output to grow. The next section explains why access to credit and investments, that are needed for growth, are so lacking in the Kyrgyz Republic.

² Land productivity measures the units of output per hectare of farmland.

4 INVESTMENT AND PRODUCTIVITY IN KYRGYZSTAN

Small-scale production is more efficient now than it was 10 years ago, but sustained productivity growth has been elusive. Sustained growth after the transition depends upon institutions, investment, and upon improved connections with regional markets.

4.1 Productivity Improvements

Despite low investment, the Kyrgyz Republic's output and land-productivity has improved markedly since the early transition years. Crop yields have increased 80 percent between 1994 and 2003, for example. But Kyrgyz agricultural productivity still lags behind European comparator countries, and average crop yields are only just on-par with the average for developing countries. There is room for improvement.

From a purely technical perspective, the Kyrgyz agricultural sector could be as productive as Europe. For example, the country's cropland per person is roughly equal to the European average, despite the fact that only 13% of total land is arable (see Table 1). Furthermore, most Kyrgyz cropland is irrigated, is further south, and enjoys a milder climate than much of Europe. In general, the necessary conditions exist for the cultivation of a wide range of products. Despite these favorable conditions, average crop yields still lag behind Europe and the West.

Previous technical reports³ indicate that farm intensity was low, leading to a misperception that farming still resembles Soviet-style farm technology. This would be misleading, since most land is now tilled more intensively and more manually in 2006 than 15 years earlier. The main reason crop yields are relatively low today is not for lack of labor intensity, but instead it is due to the low quality seeds and the lack of fertilizer. Because Kyrgyz small-plot farmers face relatively low local market prices, they cannot justify the use of expensive fertilizers or high-quality seeds. In this sense, low labor productivity can be explained by lack of local demand for "superior" good in local markets, and that transit costs are too high for superior goods to be profitable on world markets.⁴

On the other hand, a study by Christiansen and Pomfret (2007) finds that prices for some goods, such as cereals and grains, are 50-80 percent *higher* in Kyrgyz markets than they are on world markets. These high prices benefit larger-scale farmers, mostly located near the Kazakh border. But the production technology does not apply for the typical small-scale farmer, who has less than 1 hectare of land. In addition, these higher prices do not necessarily raise income for Kyrgyz farmers. Incomplete and segmented markets provide arbitrage opportunities for traders, and despite growing competition in trading, there remains a large wedge between farm-gate prices and market prices across the country.

Despite higher land productivity, farm income for individual workers has not grown in parallel with output in Kyrgyzstan. Swinnen, et. al. (2005) show that per worker revenues are low compared to middle-income economies (e.g., US\$785 per worker in 1995 falling to US\$570 in 2001). This reflects the combination of intensive labor inputs and relatively low prices for small-farms, leading to a low marginal product of labor. As a result,

³ World Bank 2002, *Agricultural Survey of Kyrgyz Republic*.

⁴ Trade and transport costs are discussed in Section 6 – "Distance, Geography, and the WTO".

revenue per worker is the only indicator that has not improved over the past 10 years (compared with revenue per hectare, and yields per hectare). On the other hand, revenue per family household has been rising, as more workers combine non-farm jobs with additional family farm work.

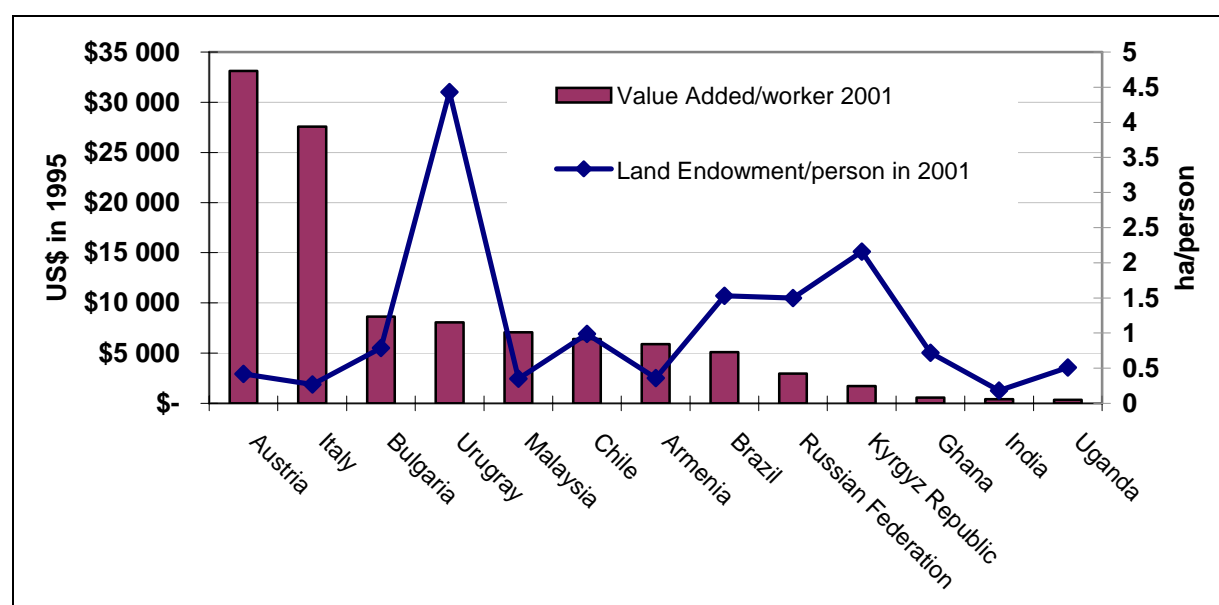
Table 1: Kyrgyz Land Resources, Inputs, and Yields in an International Context

	Kyrgyz	Europe	Austria	Italy	DC's	Brazil	México	India	Malaysi a	LDCs
Relative endowments (2001-2002)										
Cropland (workers/ha)	0.4	0.1	0.1	0.1	0.1	0.2	0.3	1.6	0.4	1.4
Cropland irrigated (percent)	76.0	8.3	0.3	24.9	10.7	4.4	23.2	33.6	5.0	23.2
Pasture land (ha/person)										
Relative yield: 2001-03 and 1994-96										
Cereal yield (tons/ha) (01-03)	2.8	3.4	5.5	4.7	3.6	3.1	2.9	2.3	3.1	2.8
Cereal yield (tons/ha) (94-96)	1.9	2.9	5.9	4.7	3.2	2.4	2.5	2.1	3.1	2.6
Root/tuber yield (tons/ha) 03'	18.4	15.8	29.0	24.2	17.6	14.0	23.9	19.1	9.2	12.0
Root/tuber yield (tons/ha) 96'	13.7	15.1	25.6	23.4	16.5	13.0	19.9	16.9	9.7	11.6
Use of selected inputs (2001)										
Fertilizers (nutrient kg/ha)	18.8	73.4	168.0	128.1	79.9	102.9	68.3	102.1	159.0	98.6
Tractors (tractors/1000ha)	18.0	36.1	11.0	148.2	30.5	12.1	11.9	9.0	219.0	8.3
Combines (ha/combine)										

Note: DCs: developed countries; LDCs: developing countries
Source: World Resources 2005

Figure 8 shows that Kyrgyz farm revenues per worker are less than ½ of comparator countries such as Uruguay and Malaysia, and are about 1/10 the level of European countries like Italy and Austria. Low revenues per-worker are partly -explained by the high ratio of farm-workers to land, and partly by low farm-gate prices for Kyrgyz farm outputs.

Figure 8: Revenues per Worker for a Selected Group of Countries, 2005



Low farm-gate prices are, in turn, an artifact of Kyrgyzstan's geographic situation as a land-locked, mountainous country. For some goods, farmers face prices that are much lower than world prices (e.g., export prices for wool are less than one-third of world prices for standard quality). Likewise for many inputs, such as fertilizer, farmers face prices that are higher than the world price.

4.2 Market Failures After Transition

This section describes some of the common market failures that arose in Kyrgyzstan after free-market policies were imposed in the presence of a weak government and institutions.

4.2.1 Contract Enforcement

An important market failure for agriculture is the lack of contract enforcement. In traditional agriculture markets, purchase agreements for inputs and outputs allow farmers and agro-processors to plan ahead during the crop-cycle. During interviews with vegetable drying and pickling companies, however, producers complained that they cannot plan ahead more than six months.⁵ They must wait until harvest time to observe what has been grown before they can decide what to produce. This wait-and-see approach makes it impossible to make contracts with international buyers and it makes planning and expansion difficult. According to these businesses, farmers simply do not honor agreements. If the price at a local market is higher than the contracted price – then farmers simply sell on the market, ignoring the contract. Likewise, some businesses have confessed that they also breach contracts, They buy inputs on the spot market if they are cheaper, leaving the farmers to sell their outputs at lower prices as well. Box 3 provides some first-hand accounts of agro-processors' grievances.

The result of contract failure is that neither farmers nor factories can plan ahead. Without knowing with certainty how much money will be earned after a growing season, farmers cannot justify investments in fertilizer or seeds – the inputs which are known to increase productivity most. Table 1 above shows that fertilizer use in Kyrgyzstan was just 18.8 Kilograms per hectare, compared with 168.0 kg/ha in Austria and 98.6 kg/ha among other less-developed countries.

Box 2: Contracts not enforced for Agro-processors

In 2002, the "BASE" center for land reform toured several small and medium enterprises to better understand the agro-processing business conditions. Each enterprise mentioned contract-enforcement and mediation as an important constraint to growth. Some extracts are below.

Koopromservice Ltd ("PAKS") LTD, near Cholpon Ata. PAKS is a fruit juice processing enterprise that has been operating for ten years, first as a cooperative and more recently as a company with limited liability. "Product markets are reliable and include buyers in neighboring Khazakstan. On the other hand fruit supply is uncertain, preventing PAKS from entering forward contracts with buyers. The supply of fruit to juice processors varies with fruit quality. When growing conditions are favorable, a larger proportion of the fruit crop can be sold on the fresh fruit market where prices are higher. Although risk-averse growers might be willing to contract a portion of their expected crop to

⁵ Author's interviews with agro-processing and marketing representatives.

a processor, PAKS saw little point in bearing the (ex-post transaction) costs of negotiating such contracts because; (a) it did not consider the growers to be trustworthy, and (b) it could not rely on the legal system to enforce contracts.” (page 6, from Trip Report)

Kalinina Association of Peasant Farms, Tyup, Kyrgyzstan Kalinina is comprised of 200 member households. Adult members are employed by the enterprise and each household contributes a share of its land (originally 0.5 Ha) and machinery. Kalinina technically insolvent, with debt obligations to the State exceeding its own assets. For this (and other) reasons, Kalinina is not creditworthy and labors under a liquidity crisis. To make matters worse, it had been unable to recover 1.5 million Soms owed by private farmers who had purchased seed from Kalinina on credit. The legal system is too unreliable and costly to enforce these contracts. Micro-credit programs targeted at small owner-operators have also encouraged defections.

Ecoproduct Ltd, Tyup, Kyrgyzstan Ecoproduct would like to secure some of its fruit supplies and product sales (to reduce risk and improve its creditworthiness) but sees little point in negotiating forward contract due to the lack of a judicial system. All transactions are cash-based.

In all of these examples, the companies face liquidity problems and at the same time are unwilling to enter into forward contracts due to lacking enforcement. In the case of PAKS and Ecoproduct, the firms are also owned by long-standing partners, or they are family owned. When asked about raising capital by selling shares of their companies, both indicated that they would not trust any other shareholders.

4.2.2 Poor Investment Climate

The second failure and constraint to sustained growth is a poor investment environment. This section compares investment and savings indicators for Kyrgyzstan vis-à-vis several similar countries and shows that in general, the Kyrgyz investment climate is weak, and the cost of borrowing is high. Most domestic savings and investment is not placed in banks or financial instruments. Instead, most investors target fixed assets, such as land and real-estate, rather than productive (but depreciable) assets, such as farm machinery or transport equipment.

Table 2: Gross capital formation (% of GDP)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Average 1996-
Mongolia	29.9	28.1	35.2	37.0	36.2	36.1	32.2	38.0	36.5	35.5	34.5
Azerbaijan	29.0	34.2	33.4	26.5	20.7	20.7	34.6	53.2	53.5	..	34.0
Vietnam	28.1	28.3	29.0	27.6	29.6	31.2	33.2	35.4	35.6	..	30.9
Kazakhstan	16.1	15.6	15.8	17.8	18.1	26.9	27.3	25.7	26.3	27.5	21.7
Uzbekistan	29.2	21.7	20.2	17.5	16.3	19.6	20.3	20.2	24.5	25.1	21.5
Cambodia	14.5	14.8	11.7	17.4	16.9	18.7	20.1	25.2	25.8	..	18.3
Kyrgyz Rep.	25.2	21.7	15.4	18.0	20.0	18.0	17.6	11.8	13.8	20.4	18.2

Sources: World Bank Live Database

The first indicator is Gross Capital Formation. Kyrgyzstan ranks lowest among comparator countries in Gross Capital Formation, with a 10-year average rate of 18.2% of GDP. Cambodia is the next-lowest country, while Mongolia has the highest rate of investment, at 34.5% of GDP. Kyrgyzstan and Mongolia are interesting comparator countries, because both countries are endowed with similar resources, and because both countries face similar difficulties associated with landlocked geography and a remote population. Also, both countries are very small, very open economies. Both economies are members of the WTO

and the populations are small (3 million in Mongolia and 5 million in Kyrgyz Republic). Mongolia has maintained an open, stable foreign investment policy, which has fostered a competitive and thriving banking sector.

Financial services and banks are crucial in order for small and medium-sized firms to invest and grow. But the Kyrgyz banking system is generally not trusted among the population, and the sector is not competitive. Table 3 shows indicative interest rate spreads, the difference between lending and deposit rates, for five comparator countries.

Table 3: Interest Rate Spreads (lending minus deposit rate), 1996-2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Mongolia	43.2	45.7	19.3	15.9	15.9	15.9	15.2	12.3	11.2	10.6
Cambodia	10.0	10.4	10.5	10.2	10.5	12.1	13.7	16.5	15.8	15.4
Vietnam	20.1	5.9	5.2	5.3	6.9	4.1	2.6	2.9	..	3.9
Azerbaijan	7.4	6.8	11.2	8.7	5.9	6.5	8.5
Kyrgyz Rep.	28.3	9.8	37.7	25.3	33.5	24.8	18.9	14.1	22.6	20.8

Source: World Bank (taken from CEM Mongolia, 2007)

At 20.8 percent, Kyrgyzstan has the highest spread between deposit and lending rates, with lending rates as high as 37.7% in 1998. Although rate-spreads were also high for Mongolia in the early 90's, they have declined considerably in that country, and are now relatively low, at 10.6% in 2005. Kyrgyz rate-spreads remain high, reflecting weakness and lack of competition in the Kyrgyz banking system.

Some economists may point to small market size as one reason for the higher spreads. However, the data among small, open economies shows that rate-spreads can be low, as in Azerbaijan or Mongolia.

A country's external debt increases the perceived risk of default among global investors, raising the interest rate for borrowing. Naturally, high interest rates make investment more costly for business. The average ratio of external debt in Kyrgyzstan between 1996-2004 was 108% of Gross National Income, which, again, was the worst ratio among comparator countries (See Table 4). In 2006, Kyrgyzstan was offered debt-relief equal to approximately 60% of Gross National Income under the HIPC (Highly-Indebted Poor Countries) program at the World Bank. After 10 months of consideration, the Kyrgyz government rejected the offer.

Table 4: External debt (% of GNI)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	Period Average
Kyrgyz Rep.	63.6	78.7	96.1	147.7	142.1	117.5	119.5	109.2	99.3	108.2
Mongolia	45.8	58.3	74.7	102.4	96.0	87.2	93.1	116.6	94.7	85.4
Cambodia	68.9	70.2	80.5	73.5	74.4	73.9	74.1	75.3	72.5	73.7
Vietnam	108.2	82.6	84.1	82.0	41.7	39.0	38.7	40.6	40.1	61.9
Kazakhstan	14.0	18.7	27.9	37.5	72.5	70.8	73.3	78.2	85.1	53.1
Uzbekistan	17.1	19.9	22.5	29.1	34.1	43.4	50.1	50.1	42.0	34.3
Azerbaijan	14.1	12.9	16.0	23.7	27.2	24.2	25.6	25.5	25.4	21.6

Mongolia and Cambodia also have relatively high debt, but have low interest-rate margins. This indicates that governance and institutions, as much as macro-performance, dictates the cost of borrowing. One partial explanation for the disconnect between investment, inflation, and debt is the dollarization of these economies. Across most of the economies listed in Table 4, major assets are denominated in foreign currency (usually US Dollars) units, rather than local currency. Apartments, automobiles, and land are all priced and purchased using US Dollars in Kyrgyzstan, rather than local currency.

Taken together, the unattractive investment situation in Kyrgyzstan has led to low rates of savings in banks and other financial assets. Table 5 shows that Kyrgyzstan has the lowest rate of domestic savings among comparator countries, tied with Cambodia, at 7% of gross national income.

Table 5: Gross Domestic Savings (% of GNI)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Period Average
Mongolia	22	34	22	23	21	19	11	18	25	26	22
Vietnam	17	20	22	25	27	29	29	27	28	..	25
Uzbekistan	23	19	20	17	19	20	22	27	32	33	23
Kyrgyz Rep.	-1	14	-6	3	14	18	14	5	4	0	7
Kazakhstan	15	13	11	20	26	26	27	31	35	37	24
Cambodia	-4	3	-1	4	5	11	12	16	15	..	7
Azerbaijan	3	10	2	13	21	24	27	30	30	..	18

The rate of 7% contrasts sharply with Mongolia or even Kazakhstan, who save 22% and 24%, respectively. This savings rate is also about one-half the average level for developed countries. Savings (as a percent of GDP, rather than GNI) is 13% in the USA, 15% in the UK, 20% in Germany, and 28% in Japan.⁶

4.2.3 Risk and Profitability for Small-Scale Farmers

The third market failure is the basic production technology and motivation among small-scale farmers. Most small-scale farmers work simply to survive, they consume a part of their output and sell the surplus at market prices. This production structure contrasts sharply against corporate or business farming, where all outputs are sold at market prices, and the owners use farm proceeds to purchase food and shelter separately. The resulting business structure is one of limited risk-taking. Because small-scale, subsistence farmers face greater risks (e.g., starvation) by growing new crop types or experimenting with different inputs, these farmers choose the least risk, even if it implies lower household income.

⁶ Source: "Econ-Stats" website, which re-produces data from the IMF World Economic Outlook. (Viewed on May 5th, 2007).

5 EVOLUTION OF INDUSTRY AND INSTITUTIONS

More than 15 years after the transition to free markets and capitalism, Kyrgyz economic and business development still reflects the traditional soviet-style of doing business. This section chronicles the shift away from Russian support, the loss of Soviet technical support systems for farms and industries, and the development of a rent-seeking administration. These events molded today's industrial structure, where most (80%) firms are very small and operate informally, and where a few firms (5%) are very large, formal organizations, medium-sized firms represent the smallest number of firms in the country. This type of industrial structure limits the transfer of technology and know-how to small farms and companies, which limits the possibility to increase productivity and competitiveness.

Role of Public-Sourced Agricultural Support Services

In many countries, the government provides several public goods for farmers. In the United States, special agricultural schools conduct research and development and teach best technology to future farmers and veterinarians. This R&D has increased farm productivity dramatically of the past 50 years. In the US, for example, 2002 farm output was 260% higher than in 1948, even though the number of farms has fallen by 64% over the same period. Some other services include food inspection services, which eliminates the uncertainty for food processors, final consumers, and exporters. Federally-subsidized programs for livestock health, breeding, and crop rotation allow farmers to increase yields, increase variety, and lower costs.

The Kyrgyz equivalent of these schools and agencies were created during the Soviet period as well. Kyrgyz farmers also had access to Moscow's schools and research institutes, which helped to train local veterinarians and agronomists. But during the transition period, Russian support services were stopped, and lack of funding, or corruption, converted the remaining Kyrgyz agencies into bureaucratic, rent-seeking organizations. As a result, there are no longer strong R & D centers for agriculture. Moreover, most Kyrgyz farmers and ranchers do not have access to modern farming and ranching techniques – they still use technology from the Soviet times. Consequently, the quality and quantity of Kyrgyz outputs is inferior, making Kyrgyz farmers uncompetitive on international markets, and forcing them to sell at the local market price.

Transition to a Rent-Seeking Administration

Agriculture support organizations were not the only casualty during the transition period. Almost every government agency faced severe reductions in funding. Civil servants' wages fell in real terms, and about 50% of all public-sector workers were laid-off. By 2006, the entry-level wage for desk-officers was the equivalent of \$60 per month, or just under \$2.00 per calendar day. With civil-service wages near poverty levels, the government's transition to a rent-seeking agency is not surprising.

Evolution of Post-Transition Civil Service in Kyrgyzstan: During the period of Russian control, most Soviet-era civil-servants operated using a highly-informal system. Litwack (1991), describes how technical laws were ignored because of unrealistic output expectations. Instead of following the rules, which were determined to be outlandish, factory managers developed a personal relationship system which superseded the written

law. This system remains partly-intact in Kyrgyzstan, especially among business and political leaders who were born before 1970.

The system government system eventually evolved into an organized market for profitable rent-seeking positions (Shleifer and Vishny, 1993, 1998), similar to the case in the Philippines under the Marcos regime. Wade (1985) also provides a detailed account of this situation by dissecting the "internal labor market" that operated within Indian governmental organizations during the 1970's and 80's. There, as in Kyrgyzstan, cascading payments are made to superiors in exchange for lucrative positions. The market price for positions is directly linked to the position's profitability. In Kyrgyzstan, like India 20 years ago, rent-seeking is an expected activity, driven by high-level officials who apply pressure to subordinates to collect bribes and remit them up through the system. According to Wade, this pressure was driven by the cost of local elections, where officials must bribe village managers in exchange for votes.

Four factors are identified that re-enforce a stable equilibrium in Kyrgyzstan as a rent-seeking society, these are:

- Wage levels that are near poverty for civil-servants, which makes supplemental income essential for survival,
- An unstable political environment, which leads to a short-term outlook among politicians and their subordinates,
- A complicated regulatory structure, with numerous conflicting rules and bylaws, which provides mid-level bureaucrats with justification for interference,
- An inconsistent system of penalties for non-compliance, making bribery an attractive alternative to paying fines.

Effect of Government-Interference upon Firm Size

Kyrgyz businesses respond to rent-seeking in two ways. The first response, adopted mostly by self-employed and small-farm workers, is to operate completely outside of the government system. These workers produce and trade in small quantities, for small amounts of money. They rarely collaborate if the activity is large enough to attract attention, and in this context, farmers and businesses distrust one-another because they have no legal recourse if agreements are broken.

Agriculture lends itself to a small-scale, informal approach because economies of scale are considered to be weak, especially among transition countries in Central and Eastern Europe.⁷ But the surrounding services, such as transportation, storage, market analysis, and sales are different. These services typically exhibit strong economies of scale. For example, milk product quality is higher, and distribution costs are lower, when farmers can utilize milk-chiller equipment. But milk chiller equipment is only justified when the dairy is fairly large. According to Bishkek SUT, a major milk processor and distributor, Kyrgyz milk farmers are not interested in a milk chiller, even if it was provided for free, because they believe that the expected hassles and bribes would be more costly than the expected increase in profitability.

⁷ See Gorton and Davidova, 2004, or Boussemart, 2006.

As a result, most Kyrgyz family farms try to remain small enough to avoid government attention. This presents a problem because it discourages a “rationalization” of the industry, and by definition it negates, increased output and profits.

The second type of firm in Kyrgyzstan is the large corporation with experience in post-soviet countries. One example is Win-bill-dan, a milk production and distribution company that owns Bishkek SUT. Bishkek SUT was one of two investments in Central Asia that were acquired to serve the Kyrgyz and Kazakh dairy markets. Bishkek SUT was unprofitable for the first three years of operation. But after making the necessary capital investments, the local company has grown one-thousand percent, and now delivers more than \$10 million of raw milk and milk products to Kyrgyz and Kazakh markets.

Table 6: Differences when Doing Business as a Small, Medium, and Large Firm in Kyrgyzstan. The following table compares the approach to business as firm size changes. Small and large firm sizes have the most stable business-environments, while medium-size business faces most of the risk and are most likely to fail. As a result, few medium-sized firms exist in Kyrgyzstan at any point in time.

Small-Scale Farm	Medium Farm or Agro-business Contracting with Suppliers and Buyers	Large Corporation
<ul style="list-style-type: none"> No Contract Necessary, surplus is sold to local markets upon harvest 	<ul style="list-style-type: none"> Input contracts are essential to plan production or planting Sales contracts needed for borrowing and investment 	<ul style="list-style-type: none"> Contracts are optional, purchases and sales can come from within the organization, or from external vendors, or both
Transport and Distribution		
<ul style="list-style-type: none"> Personal transport, own car or truck 	<ul style="list-style-type: none"> Must lease or rent major transport equipment Transport requires several bribes police and customs Cross-countries can extract high fees for trans-shipment services, including requirements of own-country trucks 	<ul style="list-style-type: none"> Typically owns transport equipment Has relationships or 'nexus' in most transit countries Has 'redundancy', difficulties at one link can be off-set by shipping along a different link or plant
Credit, Finance, and Planning		
<ul style="list-style-type: none"> Family loans Micro-credit agencies Typically no annual losses, because no investment 	<ul style="list-style-type: none"> Loans typically larger than micro-credit, require collateral Bank Loans at high rates (20%-30%) Losses cannot be sustained for long periods, one year at most Private investors, or political partners necessary for operation 	<ul style="list-style-type: none"> Access to international financial markets Losses at a single plant can be sustained for multiple-years

Source: Author.

When asked about the challenges of micromanagement and rent-seeking by civil-servants, the company representative indicated that they were not major concerns. The company can afford to be transparent and compliant because they are large. They employ full-time accountants and lawyers to ensure the factory complies with regulations, leaving less room for rent-seeking among civil-servants. Where bribery does exist, the company claims that the fees are minimal relative to the value of their cargo or operations. The company is impacted indirectly, however, through disruptions to their supply chain. Because farmers refuse to use a collective milk-chiller, the company must collect milk door-to-door. At times, supplies disappear altogether, if Kazakh buyers pay higher prices. This uncertainty sometimes forces the company to import milk-powder from their regional suppliers at higher cost. To date, Kyrgyz farmers still only meet 60% of the company's raw milk demand. Despite unreliable local supplies, Bishkek SUT continues to grow and increase

profits. Support from the parent company, long-term planning, investment capital, and distribution networks to markets have led to a success story at Bishkek SUT. Local, small-scale producers on the other hand, have none of these advantages and cannot compete except in local markets.

To summarize, the existence of a rent-seeking state organization leads to two distinct organizational types: very small, household level farms who operate informally to avoid taxes and rent-seeking by the state; and large businesses who have the professional staff and resources to manage the rent-seeking state in a cost-effective way. Despite some success stories from major manufacturers, most farmers (83%) are small-scale. The state system discourages plot consolidation and medium-scale farming and distribution, which forces farms to remain at subsistence levels..

6 DISTANCE, GEOGRAPHY, AND THE WTO

Increased international trade contributes to economic growth – this idea has broad support among almost every economist in the world. Several famous econometric panel studies (Dollar, 1992, Sachs and Warner 1995) have correlated “openness” with growth, and during the late 1990’s and early 2000’s, international trade liberalization policy was the most popular development tool posited by economists. Kyrgyzstan was one of the many economies who undertook a policy of aggressive trade liberalization during this time. Base-level import tariffs were reduced to 10%, most non-tariff barriers were eliminated, and the country acceded to the WTO in December, 1998. But today, nine years after WTO accession, the benefits of international openness have not materialized. What happened?

The Kyrgyz case is a clear example of how economic policy is ineffective, and even counter-productive, when applied without regard to the country’s unique situation. In Kyrgyzstan, for example, there existed two “real world” trade restrictions which were ignored by development experts as they pushed for liberalization. The first restriction was Kyrgyzstan’s challenging physical geography as a mountainous, landlocked country. The second restriction was the fact that, at that time, none of Kyrgyzstan’s neighbors were members of the WTO. As a result, accession to the WTO and unilateral trade liberalization did little to change the country’s export position. Since 1998, these two “hard” constraints to trade have been acknowledged, and overcoming these obstacles has been difficult.

Some businessmen are now questioning the wisdom of WTO accession, especially before any neighbors were members. The WTO system required the customs office to operate two systems: one for WTO member exports, and another for traditional exports. This created additional paperwork for exporters, especially because none of Kyrgyzstan’s traditional export markets were members of the WTO (Russia and Kazakhstan).

After implementing a liberal trade policy, development economists now acknowledge that the true challenge lies in transportation costs and transit fees. The major economic markets are not only far, they lie across major mountain passes. Furthermore, routes to the most promising markets, such as China and Russia, must pass through Kazakhstan, leaving distributors at the mercy of Kazakh police and customs officials. The impact of trade and transit restrictions among land-locked countries is now a popular development topic.

Research on the effect of being land-locked and the role of transit countries has grown significantly since the 1990's. Early research by Warner and Sachs (1997) found that land-locked African countries, on average, grew 0.58 percent more slowly than those with seaports. But more recently, specific work has been done to show the effects of transit constraints in Central Asia in particular. For example, Bartek (2006) shows that most-favored nation status (MFN) as part of the WTO has reduced tariff barriers by 5% for Kyrgyzstan's key trading partners (Russia and China), but that tariffs represent only 1/5 of the total trade cost between Kyrgyzstan and Russia, and only 1/10th of the trade costs to China. Grigoriou (2007) uses panel data to show that "transport infrastructure" is more important in transit countries, rather than the home country. He finds that improvements to own-country infrastructure would raise exports (or imports) by merely 6.5% (or 8.6%), but an equivalent improvement to transit-corridor infrastructure raises exports by 52%. He also finds that trade costs are higher when a transit country has a "monopoly" for a particular route.

For the Kyrgyz farmer, trade liberalization remains an esoteric concept that has not changed the prospects for growth. Those food products where Kyrgyzstan has a comparative advantage, such as roots, tubers, meat and meat products, are also heavy and perishable. As a result, agriculture trade remains "locked" within the low-income Central Asian region, and it implies low output prices for local farmers and headers. Prospects for growth depends less upon WTO membership, and more upon regional-integration and more upon transit-infrastructure such as smooth roads, bridges, and proper transit stations.

7 KYRGYZ PROSPECTS FOR SUSTAINED GROWTH

Can agriculture re-emerge as an engine for growth, or will it remain a “social safety net”? We saw in section one that the government’s aggressive land-reform policies contributed greatly to Kyrgyzstan’s economic recovery, but that the effect was not permanent. Over time, the agriculture sector absorbed most of the country’s unemployed labor, and agricultural sector has reached the production-possibilities frontier. A challenging investment climate, weak institutions, and high transport costs have all contributed to lagging growth in agriculture, and the economy overall. So, what are the prospects for sustained growth in Kyrgyzstan? Perhaps surprisingly, we believe these prospects are significant.

Although the geographic and political barriers to growth in Kyrgyzstan are daunting, there is significant room for economic growth. Most of this potential is un-related to Kyrgyz domestic policies, and more related to the striking economic expansion among Kyrgyzstan’s neighbors. Kazakhstan has enjoyed robust growth for the past decade, mostly due to oil and natural gas development, and China’s rapid growth has shifted the country’s net trade position from a food exporter, to a net importer as demand for meat and related feed-stocks grows. These countries have invested significantly into transportation infrastructure, so that now there exist large, smooth highways and railways across Kazakhstan and Western China.

If these new links are accompanied by transit agreements with Kazakhstan, farmers will enjoy rising meat and vegetable prices, and falling fertilizer costs as trade and transit prices fall.

These neighbors’ new wealth will improve Kyrgyzstan’s prospects in other, seemingly-unrelated, ways as well. For example, new Kazakh investments into the Bishkek and Issyk-kuul regions have led to a housing and construction boom. Bishkek residents have suddenly seen their home values double between 2005 and 2007, leading to sharp increases in personal consumption. The effect has been dramatic. Between January and July of 2007, for example, growth reached 9.7% on an annualized basis, compared with 2.7% the year before. As investment grows, so will consumption, and eventually, urban employment. The result, as predicted by Harris and Todaro, will be a new pattern of migration – away from the rural farms, and back toward the cities.

As families move to urban areas, we expect the farming plots they left behind to be consolidated, either through leasing, or through sales. In either case, the pattern of consolidation, together with improved regional infrastructure, and WTO accession by Russia, Kazakhstan and Tajikistan, may finally help Kyrgyz farmers to export products to more lucrative markets.

In an increasingly-globalized economy, we know that long-term prosperity will depend upon a knowledge-based economy and trade in services. But for Kyrgyzstan, the near term growth prospects still lie within the old economy sectors like agriculture and agro-processing. And as the constraints to investment and trade begin to dissipate in this small, remote country – the prospects for growth have become brighter.

REFERENCES

Boussemart, J.P., J.P. Butault, N. Delame, E. Matvejev, and J.M. Rousselle, "Economies of scale and optimal farm size in the Estonian dairy sector," *University de Nantes Working Paper*, June, 2006.

Dollar, D. "Outward-oriented developing countries really do grow more rapidly: evidence from 95 LDCs, 1976–85", *Economic Development and Cultural Change*, vol. 40(3), (April 1992), pp. 523–44.

FAO Corporate Document Repository. *The State of Food and Agriculture 2003-2004*. 18 May 2007.

Gorton, M. and S. Davidova (2004), "Farm productivity and efficiency in the CEE applicant countries: a synthesis of results," *Agricultural Economics*, 30 (1), 1–16.

Grigoriou, Christopher. "Landlockedness, Infrastructure, and Transit Arrangements: New Estimates For Central Asian Trade," *World Bank Policy Research Working Paper Series*, No. 4335, January, 2007.

Harris, J.P. and M. P. Todaro, "Migration, Unemployment and Development: A Two-Sector Analysis," *The American Economic Review*, Vol. 60, No. 1, 126-142. 1970.

Lerman, Zvi, "An Analysis of Productivity Trends in CIS (Fourth Draft)", *World Bank Working Project Report*, November 28, 2006.

Lerman, Z and Schreinemachers,; "*Individual Farming as a Labor Sink: Evidence from Poland and Russia*," *Comparative Economic Studies*, Vol. 47, No. 4, pp. 675-695, December 2005.

Litwack, J.M. "Legality and Market Reform in Soviet-Type Economies," *Journal of Economic Perspectives*, Volume 5, Number 4 - Fall 1991, Pages 77-89.

Lyne, M, M. Roth and M. Childress. *Trip Report: Innovating Institutions to Help Land Reform. Beneficiaries: Kyrgyzstan* (2002) pp. 1-10

National Statistical Committee of Kyrgyzstan, Unpublished Data for Light Industry and the Food Industries through 1993 and World Bank staff calculations (1995).

Rozelle, S. and Johan F. M. Swinnen. *Success and Failure of Reform: Insights from the Transition of Agriculture.* *Journal of Economic Literature* Vol. XLII (June 2004) pp. 404–456.

Sachs, J.D. and Warner, A.M.. "Economic reform and the process of global integration", *Brookings Papers on Economic Activity*, 1995, no. 1, pp. 1–118.

Sachs, J.D. and A.M. Warner. "Fundamental Sources of Long-Run Growth," *American Economic Review*, 1997, v. 87, no. 2, pp. 184.

Shleifer, A. and R.W. Vishny. "Corruption," *The Quarterly Journal of Economics*, Vol. 108, No. 3. (Aug., 1993), pp. 599-617.

Swinnen, JFM, L. Dries, and K. Macours, "Transition and agricultural labor," *Agricultural Economics*, 2005 32:1 15.

Wade, Robert. "The market for public office: Why the Indian state is not better at development," *World Development*, Vol 13, Issue 4, April 1985, Pages 467-497.

World Bank, *World Bank Agricultural Memorandum for Kyrgyzstan*, (2002).