GROWTH AND RURAL POVERTY IN THE CIS7
CASE STUDIES OF GEORGIA, THE KYRGYZ REPUBLIC, AND MOLDOVA

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I. Introduction

1. Rural poverty is a major problem in the seven IDA eligible countries of the Commonwealth of Independent States (CIS7), exceeding urban poverty in four out of the seven countries.\(^1\) The high rates of poverty in rural areas are partially a historical phenomenon, but also reflect the immense dislocation experienced by the rural sector immediately following the break-up of the Former Soviet Union (FSU). Production and marketing structures, the incentive framework, the provision of social services, and farm and non-farm employment opportunities were profoundly affected by the switch to a market economy and the break-up of the state farms and collectives.

2. Despite its prevalence, little is known about rural poverty, including the impact of growth or recent macro and sectoral reforms on rural livelihoods and well-being. Regional or country focused poverty analysis has examined aggregate rural poverty trends, only rarely examining their possible determinants, such as access to land and livestock assets, and participation in agricultural product and factor markets.\(^2\) Similarly, analyses of rural development in the CIS7 countries have focused on growth constraints along with as the overall content and pace of sectoral reforms, but have paid less attention to the linkages between macro and rural policies and rural poverty outcomes.\(^3\)

3. The overall objective of this paper is to improve the understanding of rural poverty in the CIS7 countries and to highlight priority policy options to reduce it. In particular, the paper places rural poverty outcomes within the broader context of macro and sectoral performance, and also analyzes the determinants of rural poverty as well as the characteristics that allow rural households to benefit from overall economic growth.

4. **Approach.** The study focuses on growth and rural poverty trends in the latter half of the 1990s in three CIS countries – the Kyrgyz Republic, Georgia and Moldova. The economic, geographic and political characteristics of these three countries, as well as their poverty and growth outcomes, are broadly representative of the CIS7; hence, the lessons learned from them will be relevant across the CIS7 (Box 1 and Annex A1). The report draws on macro and sectoral output data as well as panel household survey data for the period 1997/98 through to 2000/01 for the three countries. In addition, it draws on analysis of agricultural markets in Moldova and the Kyrgyz Republic and a brief assessment of the business climate for rural entrepreneurs in Georgia.\(^4\) The paper focuses on the monetary dimensions of poverty and does not address its non-income aspects.

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\(^1\) The CIS7 include: Georgia, Moldova, Kyrgyz Republic, Armenia, Azerbaijan, Uzbekistan, and Tajikistan.

\(^2\) See World Bank 2000a, b, 2000, 1999a, b and 1995.


5. **Key poverty and growth outcomes.** Despite implementing fairly similar reform programs, with the notable exception of the pace and content of land reform, these three countries experienced different rural poverty and growth outcomes during the late 1990s.

- The Kyrgyz Republic was characterized by agriculture-led economic growth and rural poverty reduction in the late 1990s. GDP grew at an annual rate of 5.6 percent between 1996 and 2000, driven mainly by a 8.2 percent annual growth in agriculture, while rural poverty fell markedly, dropping by 8 percent a year from 60.2 percent in 1998 to 46.6 percent in 2001. In contrast, urban poverty, which is
lower than rural poverty stagnated between 1998 and 2000, and only began to decline in 2001 to reach 33 percent.

- Georgia also experienced high economic growth, led by a narrow set of services, but rural poverty continued to rise throughout the late 1990s. GDP grew at an average annual rate of 5.8 percent between 1996-2000, while rural poverty grew by 16 percent a year, rising from 13.4 percent in 1997 to 20.9 percent in 2000. Throughout this period the agricultural sector stagnated, growing by only 0.5 percent/year (1995-2001). Urban poverty is actually higher than rural poverty, although it began to decline in 2000 (while rural poverty continued to rise that year) to cover 25 percent of the population.

- In Moldova, the economy, including the agricultural sector, continued to decline in the late 1990s, while rural poverty rose. Economic growth began to recover in 2000, the same year that rural poverty began to fall. On average, GDP declined by 2.5 percent/year between 1996 and 2000, although it began to rise in 2000 and especially in 2001. Similarly, rural poverty continued to rise between 1997 and 1999, capping at 75.8 percent and then began to drop to reach 64.3 percent in 2001. Urban poverty experienced similar trends as rural poverty, although is significantly lower at 42 percent in 2001.

6. The paper is organized into four sections, including this introduction. The second section briefly reviews macro and sectoral outcomes and the evolution of the policy framework in the three countries, while the third section analyzes trends in poverty and inequality, examines the nature and causes of rural poverty and then assesses the key determinants affecting the ability of rural households to benefit from economic growth. The final section presents the main conclusions and recommendations.

7. **Main messages.** Four key messages emerge from the study. First, the source of growth was an important determinant of its impact on rural poverty in the three countries, and in particular, agricultural growth was more associated with rural poverty reduction than was growth led by non-agricultural sectors. In the Kyrgyz Republic, growth in the late 1990s was driven by the agricultural sector and rural poverty fell significantly. In contrast, in Georgia, growth was driven by a narrow set of service industries, while the agricultural and non-farm sectors stagnated, and rural poverty continued to rise in the late 1990s. In Moldova, rural poverty was rising through the late 1990s and only began to decline significantly in 2001, which was the first year since the transition that the agricultural sector experienced growth.

9. Second, in the Kyrgyz Republic, the benefits of agricultural growth were transmitted to the rural poor via the increase in labor, livestock and land assets, as well as beneficial returns to market participation. In the Kyrgyz Republic, these assets and market participation was positively associated with higher expenditures. In contrast, with the exception of livestock, these assets and market participation were not effective in channeling the benefits of growth to rural households in Georgia. While livestock assets were important for household welfare in Georgia, neither land and labor assets nor
market participation were associated with higher levels of expenditures. In Moldova, where there was no economic growth in the late 1990s, both the level of household labor assets and market participation rates declined, and land assets, which did increase, were not effectively linked to higher expenditures.

10. Third, the land reform programs of the late 1990s provided rural households with a basic safety net, but were not sufficient, in and of themselves, to generate agricultural growth and rural poverty reduction. This does not suggest that land reform was inappropriate, but simply that distributing land assets was not a sufficient condition for agricultural growth. The impact of land assets on household welfare was generally insignificant, except in the Kyrgyz Republic where it was small but significant. The weak relationship between land assets and household welfare reflects similar results found in other transition economies and is not surprising given: (a) the relatively equal distribution of land across expenditure quintiles, (b) the fact that the distribution was made by fiat and the marginal productivity of land across producers was not equal; (c) the low profitability of agriculture and land productivity (particularly in Georgia and Moldova), and (d) the lack of information on land quality.

11. Fourth, while all three countries implemented important macro and agricultural reforms that provided a basic framework for growth, the performance of the agricultural sector in all three countries, but especially in Moldova and Georgia, was heavily constrained by the initial conditions (e.g., structure of production in 1990, relative openness to trade) and exogenous forces (economic and climatic shocks, political stability). The macro policy framework across the three countries was broadly similar, as all three had achieved macroeconomic stability by the mid-1990s. With respect to structural and sectoral policies relevant for the rural sector, there were more differences across the three countries, mainly related to the speed of land privatization and the content of public investments, yet by the late 1990s, the remaining differences in the policy framework for the sector were not significant.

II. Sectoral performance and policy framework

12. This section provides the economic and policy context for the analysis of rural poverty presented in the following section. It first reviews the growth record and agricultural sector performance of the three countries during the second half of the 1990s, and then examines the macro and rural sector policy framework during this period.

Growth record and sectoral performance

13. Aggregate growth performance. Growth is a key determinant of per capita expenditures and a necessary condition for poverty reduction. But growth alone is not a sufficient condition for poverty reduction. Among other things, the pattern and quality of growth are important factors affecting its impact on poverty. While both Georgia and the Kyrgyz Republic experienced positive growth during this period, growth in the Kyrgyz Republic was driven by the agricultural sector, while in Georgia the services sector was the key driver of growth.
14. **Trends in GDP.** Following the uniform decline in output experienced by the three countries in the early 1990s, GDP began to recover in Georgia and the Kyrgyz Republic in 1995, while it continued to decline in Moldova until 2000 (Figure 1). Between 1996-2000, the economies of the Kyrgyz Republic and Georgia posted moderate growth rates averaging around 5.7 percent/year, while the Moldovan economy continued to decline at an average rate of 2.5 percent/year through the latter half of the 1990s, before starting a modest recovery in 2000. Reflecting its dramatic decline in the early 1990s, GDP remained at just over 20 percent of its 1990 level in Georgia, despite its relatively high growth rate, compared to 70 percent and 40 percent for the Kyrgyz Republic and Moldova, respectively.

15. **Agriculture sector performance.** The role of agriculture in generating economic growth has varied across the three countries (figures 2-4). In the Kyrgyz Republic, the economic recovery was led by the agriculture sector, while Georgia’s growth during the second half of the 1990s was primarily driven by a narrow set of services (transport, communications and financial intermediation), while the industrial and particularly the agriculture sector lagged behind. In Moldova, the continued drop of GDP through most of the 1990s was driven by weak performance of the agriculture and industrial sectors, with the latter performing more poorly than the former.
Figure 2: Georgia - Evolution of GDP by Sector, 1995-2001

Source: WDI 2002 and Georgia Department of Statistics.

Figure 3: Kyrgyz Republic - Evolution of GDP by Sector, 1995-2001

Source: WDI 2002 and Kyrgyz Department of Statistics.

Figure 4: Moldova - Evolution of GDP by Sector, 1995-2001

Source: WDI 2002.
16. The Kyrgyz Republic is the only country out of the three where agricultural production has regained and in fact surpassed pre-transition levels (figure 3). While fluctuating from year to year, the value of overall crop production in Georgia essentially stagnated over the 1996 – 2001 period and now remains at about sixty percent of pre-transition levels (figure 2). The Moldovan agriculture sector continued to decline until 1999, stagnated in 2000, and grew by 4 percent for the first time since independence in 2001, reaching only 30 percent of its 1990 level (figure 4).

17. Why did Kyrgyz agriculture outperform the agricultural sectors in Georgia and Moldova? In the Kyrgyz Republic, there was an increase in both supply and demand, which were not similarly experienced in Moldova and Georgia. In addition, the value of agricultural output rose in the Kyrgyz Republic, reflecting an improved incentive framework (as both demand and supply shifted out), and the country’s transition towards higher value crops.

18. **Supply factors.** There was an apparent shift in the supply curve for the Kyrgyz Republic compared to the other two countries, reflecting rising yields, and investments in irrigation, along with a growing labor force.

- By 2000, yields for key crops in the Kyrgyz Republic were close to what they had been prior to transition (Annex Table B7-B9). In contrast, yields in Georgia (apart from wheat and sunflowers) and Moldova continued to drop in the late 1990s, reflecting a reduction in the use of chemical inputs and associated soil depletion, which had been less prevalent in the Kyrgyz Republic. A recovery to earlier yield levels was easier to achieve in the Kyrgyz Republic, as Kyrgyz yields had traditionally been below those in Georgia and Moldova.

- All three countries experienced an increase in the labor force engaged in agriculture. The share of the workforce in agriculture in the Kyrgyz Republic grew from 33 percent in 1990 to 52 percent in 1999, while in Georgia it increased from 25 percent to 57 percent over this period, and in Moldova from 33 percent to 49 percent (Annex Table B.5). However, the increased quantity of labor assets was offset by stagnation or decline in labor productivity in Georgia and Moldova.

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5 While there seems to be general agreement that the Kyrgyz agriculture sector started to recover as of the mid-1990s, there are some questions as to whether official statistics do not present an overly optimistic picture of the extent of the recovery. See World Bank, *The Kyrgyz Republic Agriculture and Agri-business Report*, 2002, particularly annex 1.

6 According to official statistics fertilizer use in Georgia in the late 1990s stood at about 14 percent of pre-transition levels, while pesticide use had essentially vanished and stood at 1 percent of pre-transition levels. The World Bank Agriculture Sector Update points out that the extremely low use of fertilizer has led to soils becoming completely depleted of nutrients in many areas. Fertilizer use in Moldova at the end of the 1990s amounted to about 1 percent of its pre-transition levels. Given the heavy overuse of chemical inputs during Soviet times in Moldova, some reduction in the application of chemical inputs was desirable, as earlier overuse had had marked adverse environmental effects. However, the levels currently applied are about one third of what is considered optimal (World Bank, 2001a). While fertilizer use was traditionally lower in the Kyrgyz Republic, its sectoral recovery may have been partly facilitated by the availability of cheap fertilizer imported informally from Uzbekistan and Kazakhstan.
respectively, while value/added per worker rose in the Kyrgyz Republic (Figures 5-7) at least until 1999.

**Figure 5: Kyrgyz Republic: Evolution of Agriculture Value added and Ag. Labor Productivity**


**Figure 6: Georgia: Gross Agricultural Product and Labor Productivity**


**Figure 7: Moldova: Gross Agricultural Product and Agricultural Labor Productivity**

• The Kyrgyz Republic began to invest in its irrigation infrastructure in 1998, earlier than other countries. These investments are likely to have led both to the higher yields discussed above and to decreased vulnerability to climatic shocks. Both Moldova and Georgia were hard hit by weather induced shocks. Moldova experienced floods, freezes and recurrent droughts (1992, 1994, 1996, 2000) over the 1990s, which disrupted production and restructuring efforts. Fruit orchards and vineyards, which have constituted the bulk of Moldova’s agricultural exports, are irrigation-dependent, and are now more vulnerable to drought. Over the last five years, Georgia was also faced with two strong droughts in 1998 and 2000.

19. **Demand factors.** While the overall trend in the demand for agricultural products is difficult to discern, shifts in domestic and international demand, as well as the decline of the agri-business sectors, affected the three countries differently.

• Per capita consumption of most food products had recovered, or nearly recovered, in Georgia and the Kyrgyz Republic by 1999, reaching 75-100 percent of 1990 levels. In contrast, in Moldova, per capita consumption of the many food items in 1999 (except potatoes and vegetables) represented about 50 percent of their 1990 levels (Annex B.10).

• The absence of a vigorous and competitive agro-processing sector has constrained the demand for agricultural products in Moldova and Georgia, and it is limiting the extent to which further growth can be sustained in the Kyrgyz Republic (Annex Figures B9-B11). In Moldova and Georgia, the agro-processing sectors were traditionally based on perennial and tree crops for export. In Georgia, agro-processing production had fallen to about 10 percent of its 1990 level by 1999, while Moldovan agro-processing in 2000 was 10 percent or less of its 1990 level for meat and dairy products, less than 20 percent for fruit and vegetable products and about half for most alcoholic beverages, with much of this reduction occurring during the second half of the 1990s. In the Kyrgyz Republic, certain areas of food-processing started to rebound during the second half of the 1990s, fuelled by growing domestic demand, but more export oriented light industry agro-processing activity such as wool and cotton textiles, continued to decline throughout the 1990s (World Bank, 2002d).

• External shocks, in particular the Russian crisis, have reduced the demand for agricultural exports, especially in export-dependent Moldova, where the value of agricultural and agro-processed exports is about equivalent to agricultural GDP. By 2000, exports were less than half of their 1997 level in Moldova. In the Kyrgyz Republic’s agricultural exports were also severely affected by the Russia crisis. The dollar value of agricultural and agri-business exports dropped by 17 percent in 1998 and another 25 percent in 1999, and has continued to decline since then. In Georgia, by contrast, the effect of the Russia crisis may have been offset by the country’s competitive exchange rate. Its agricultural exports were less affected by the crisis, falling by twelve percent in 1998 and by another seven
percent in 1999, but recovering fully in 2000 to a level more than two and one half times higher in value terms than in 1995 (see para. 22).

20. **Incentive framework and valued added.** Largely reflecting positive demand factors, the incentive framework for agriculture was more attractive in the Kyrgyz Republic than in the other two countries. Real food prices rose steadily throughout the late 1990s in the Kyrgyz Republic, while they remained constant in Moldova and declined in Georgia (Figures 8 – 10). The growth in food prices also led to faster growth in the Kyrgyz value added for agriculture. Nevertheless, the profitability of agriculture was undermined, particularly in the Kyrgyz Republic, by the declining ratio of agricultural producer prices relative to industrial producer prices between 1995 and 2000 (suggesting that input prices and transport costs were increasing).

![Figure 8: Kyrgyz Republic Relative Prices](image)

*Source:* CIS Statistical Yearbook 2001

21. Another factor that helped to raise the value added of agriculture in Kyrgyz Republic was the shift in land use away from the low-value forage traditionally grown (to support the sheep and goat production encouraged by the Soviets), towards higher value traditional food crops for domestic consumption (potatoes, wheat, vegetables). In contrast, in Georgia and Moldova, land use shifted from traditional high value export crops (vegetables, orchards, vineyards) towards the production of staple food crops.

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7 It has, however, been suggested that the registered drop in exports of unprocessed agricultural goods such as fruits and vegetables may largely represent a shift from formal towards informal exports of such items to neighboring countries (e.g. Kazakhstan). World Bank, 2002d
Macro and rural policy framework

Macro policy

22. The macro and sectoral policy framework is an important determinant of the overall efficiency and incentive framework that drives sectoral growth. And, in the case of transition economies, which have implemented a massive land reform, the policy framework is also a key determinant of household asset levels. Was the macro and rural policy framework supportive of agricultural growth in the three countries? By the second half of the 1990s, all three had succeeded in establishing relative macroeconomic stability, an important condition for the growth of agriculture and other real sectors. All three countries sought to keep inflation under control and maintained a relatively stable exchange rate (Annex Table B3 and Figures B4-B6). Georgia even allowed its exchange rate to depreciate during this period, which partly explains the resurgence in its agricultural exports (see para. 18).

23. Nevertheless, the restrictive fiscal and monetary policies associated with the macroeconomic stability also undermined the environment for growth. Fiscal constraints
led to severe spending cuts on basic social services, on safety nets (with income from transfers falling more sharply in rural areas than in urban areas in Georgia and the Kyrgyz Republic), and on basic infrastructure maintenance and investment (access to infrastructure declined more among rural households than urban households in all three countries). Fiscal constraints also made it difficult for governments to provide support services to emerging small farm sectors and led to inadequate investments in irrigation infrastructure, particularly in Georgia and Moldova. Finally, fiscal constraints led all three governments to introduce in-kind payments for pensions and other social assistance programs in rural areas, thus undermining the development of agricultural markets. Restrictive monetary policies combined with high rates of government borrowing, and limited domestic revenue raising capacity led to high interest rates and restrictive financial sector policies (Annex Table B.4).

24. In addition to their restrictive fiscal and monetary policies, the three governments lagged in implementing key structural reforms, that might have helped both to generate growth in agriculture and other sectors and to rationalize public expenditures. Initial stabilization was supported by widespread price and trade liberalization, and good progress was made with mass privatization programs. Once these initial reforms had been substantially implemented, however, the reform process slowed down and is still incomplete in all three countries. Key remaining areas for action include: large scale enterprise reform (including the need to complete privatization/restructuring of many agribusiness firms involved in milling, bread/ﬂour production, cash crop processing, retail marketing, etc.), energy policy, social sector reforms to make education and health services more efficient and accessible, pension reform, financial sector reform, and the completion of land reform and titling programs.

25. Related to the partial implementation of the structural reform agenda, the business climate in the three countries is weak, which has hurt the development of new entrants into the agri-business and other productive sectors in rural areas (Box 2). The irregular supply of electricity in rural areas also served to undermine the development of small rural businesses. Similarly, the lack of strict budget constraints on existing and former public enterprises hurt the competitiveness of new entrants. Seeking to avoid regulatory issues (Box 2) and taxes (e.g., value added and export taxes), many of the entrepreneurs who have entered have often remained in the informal sector—a fact that has constrained

8 Georgia now has one of the lowest ratios of public expenditures to GDP on health and education in the CIS: investment expenditures as a share of total government expenditure are only about one third of the CIS average. Georgia also had the highest accumulation of government arrears in pension payments, which again may have affected rural areas more severely.

9 In Moldova, total irrigated area declined from 199,000 ha to 510,000 ha. The existing irrigation infrastructure had been built for large-scale farms based on a gravity distribution system. Most of it has deteriorated owing to lack of maintenance and rehabilitation and is no longer suitable for small-scale farming. These areas do not include the Transnistria region which had 111,000 ha of irrigated land in 1990 (World Bank, 2001a.). During Soviet times, irrigated land made up about 60 percent of arable land in Georgia (compared to less than twenty percent in Moldova). However, the war in Georgia reduced public financing for irrigation and drainage, and the sharp drop in demand for agricultural products, resulted in a rapid reduction in the area of irrigated land. By 1995, the total had fallen from 469,000 ha in 1990 to 390,000 ha, and by the end of 1998, this had further declined to 270,000 ha. Likewise, the area under drainage declined from 163,000 ha to 80,000 ha between 1990 and the end of 1998. Shuker 2000.
their ability to grow and establish reliable links to agricultural producers and export markets.

### Box 2: A weak business environment for rural entrepreneurs – key contributing factors

**Regulatory Framework for registration and licensing:** In Georgia, efforts to improve the framework pertaining to regulations, licensing, and inspection have borne limited fruit because uneven application and enforcement have resulted in a proliferation of permit requirements at the local level, creating uncertainty and increased scope for corruption. Licensing, regulatory and reporting requirements in the Kyrgyz Republic have also remained excessive throughout the 1990s and resulted in high monetary and time compliance costs for entrepreneurs. For example, agribusinesses are required to submit over 240 reports and documents to various government bodies each year and are, on average, inspected 23 times per year. As in Georgia, recent legislative initiatives to simplify and streamline registration and licensing procedures, have encountered resistance at the local level, particularly in poorer oblasts. In Moldova, the effects of excessive licensing and inspection requirements have been further exacerbated by a generally unstable and often inconsistent legal and regulatory framework which has heightened uncertainty and discouraged potential investors. Although licensing procedures have recently been streamlined, regulatory controls remain excessive and have led to widespread low-level corruption.

**Corruption** is endemic in all three countries and has significantly increased the cost of doing business. In addition to bribes associated with licensing and regulatory procedures, unwieldy tax systems and weak tax administration have provided ample room for corruption, particularly in Georgia and the Kyrgyz Republic. Corruption and tax leakages within the customs administration are extensive in all three countries. Corruption has acted as a significant non-tariff barrier, particularly for export-oriented agri-businesses. To the extent that sustained growth of agricultural production will increasingly depend on these countries’ ability to export their agricultural products, improved customs transparency is critical.

**Lack of Financing:** Rural enterprise surveys in all three countries have found that the lack of financing figures among the top constraints to business expansion in rural areas. Poorly developed financial markets, high interest rates and financial intermediaries’ inexperience in dealing with individual rural entrepreneurs have led to the virtual absence of credit, (particularly term financing) for rural entrepreneurs in general (especially those operating in the informal sector), and policies that give preferential treatment to old enterprises by not strictly enforcing budget constraints.


26. In sum, while all three countries achieved macroeconomic stabilization, which was critical for fostering economic growth by the mid 1990s, the required restrictive fiscal and monetary policies undermined the provision of key public goods that were important for generating rural sector growth and improving household welfare. Furthermore, while many structural reforms were implemented in all three countries, there remains an important structural agenda that is constraining growth and private sector development in all three countries.
Rural policy

27. This section examines the implementation of rural sector reforms, focusing on reforms related to the incentive framework and agricultural markets, land privatization and market development, the privatization of agro-processing and the development of the financial sector. Overall, the approach taken to sectoral reforms and the speed with which they were implemented have not differed substantially across the three countries, with the notable exception of land reform. While all three countries liberalized most agricultural prices and began reforming the agro-processing enterprise sector prior to 1995, the Governments continue to intervene in agricultural markets and have not fully completed their privatization programs for agri-business, or continue to offer former state companies certain advantages. With respect to land reform and farm restructuring, both Kyrgyzstan and Georgia initiated their land reform programs relatively early, but did not complete their reforms until the late 1990s. In contrast, Moldova delayed the introduction of its land reform program until the late 1990s, but then implemented it quickly and rapidly caught up with the other two countries.

28. Incentive framework and agricultural marketing. All three countries liberalized agricultural prices and trade relatively early, but continued to intervene in the markets sporadically. On the output side, Moldova and the Kyrgyz Republic did so more extensively than Georgia. Moldova repeatedly imposed ad hoc restrictions on the export of particular crops. Kyrgyzstan continues to be more interventionist in input markets than the other two countries, intervening in the markets of fertilizer and farm machinery. All three countries continue to place severe restrictions on the seed market and industry. Overall, Georgia has the most liberalized marketing and trading regime, with the exception of some interventions in the wheat market.

29. The absence of well-functioning markets, particularly on the output side, continues to be one of the key constraints to sectoral growth, particularly in Georgia and Moldova. Farmers are not effectively linked to domestic and external demand and thus experience difficulties in selling their produce. To the extent that they sell their output, producers in Georgia do so mostly through small informal traders; those in Moldova do so through a combination of informal traders and inefficient, monopsonistic agro-processors.

30. A recent analysis of marketing chains for wheat, fruit and vegetables in the Kyrgyz Republic suggests that markets operate reasonable efficiently, especially considering the relatively brief period during which they have been functioning. Price differences in these markets largely reflect differences in time, space and quality. Marketing margins are generally low in relations to cost, and where they are not, there is usually a specific explanation. Risk is an important factor in Kyrgyzstan, primarily because of the danger of spoilage of fresh products and unpredicted variation in processing. Unnecessary transaction costs in the form of bribery are widespread, but are not very high in relation to total costs (generally amounting to no more than 5 percent of total costs) (Stryker and Livinets, 2002).
31. Although this practice has become less frequent since 2000, in the late 1900s, Moldova and the Kyrgyz Republic hindered market development by resorting to in-kind collection of taxes and Social Fund contributions, which in turn forced the governments to pay wages and pensions in-kind, particularly in rural areas. In the past, the in-kind payments were a form of indirect subsidy to producers, as the payment was valued at higher than market prices. In turn, the payment to social fund and pension beneficiaries was valued at below market prices, and thereby created an implicit tax for the poor in rural areas. Also, prices have tended to be set for the entire year without taking into account seasonal price fluctuations, and have not fully reflected regional price variation. As a result, in-kind payments have tended to limit price flexibility in the market, and hence to discourage private storage and transportation (Stryker and Livinitis, 2002).

32. **Land reform.** The three countries’ differing approaches to land reform and farm restructuring, and particularly the pace at which reform and restructuring were carried out, as well as the nature of the legal framework for land rentals and sales, are probably the policy variables that have had the biggest impact on differential outcomes with respect to sectoral growth and rural poverty. In both Georgia and the Kyrgyz Republic the broad legal framework for use rights was established in the early 1990s and private ownership was authorized in 1996 and 1998 respectively. Georgia carried out a large scale distribution of use rights in the early 1990s, while land distribution did not really start until after 1995 in the Kyrgyz Republic. In both the Kyrgyz Republic and especially Georgia, large amounts of agricultural land remain in government ownership leased out to rural households. In Moldova, both the legal framework for private ownership and land distribution were enacted in the late 1990s. The legal framework for land sales remains restricted in Georgia and the Kyrgyz Republic while sales are freely allowed in Moldova. Leasing of some form is allowed in all three countries, but there may be some potential concerns about the transparency and equity of the arrangements.

33. Moldova lagged significantly behind on land reform and only seriously started implementing it in 1998, but then rapidly progressed to privatize and restructure over 1000 state and collective farms and provide land titles to over 2.2 million beneficiaries. In contrast to the Kyrgyz Republic and Georgia, Moldova’s land privatization program covered all agricultural land, not just arable land and land under perennials. Restructuring included a program to free restructured farms of old debt while protecting productive assets. Land titling was supported by a program of direct income support payments to title beneficiaries, replacing a long tradition of subsidizing inputs. While the majority of landholders initially opted to lease their land share back to the newly established corporate farms, the number of farmers who opted out of collective farming arrangements progressed rapidly in 2000 and 2001. By 2001, about half of the privatized land was leased out to various types of corporate farms, while a similar amount of land was farmed individually or by associations of peasant farms.

34. The Kyrgyz land reform program began in the early 1990s, with the majority of land distribution occurring between 1995 and 2000. Land was originally allocated to individual peasants through long-term leases, with private land ownership being permitted by law as of mid-1998. By early 2002, about 70 percent of arable land
previously held in state and collective farms had been transferred to peasant farmers. About half of all arable land was cultivated by individual farmers and another fifth was held individually but managed under a reformed collective or privatized structure. The remaining 30 percent of arable land was held by the community based Land Distribution Fund (about 25 percent), with a small amount (about 5 percent) remaining in the hands of about 20 state seed and livestock breeding farms. As of early 2001, the Government had distributed about 1.06 million ha in the form of permanent land shares to 2.67 million people and 510,551 families had received land certificate titles.

35. As in the Kyrgyz Republic, land privatization in Georgia was initiated much earlier than in Moldova. Georgia’s land reform started in 1992 through the large-scale distribution of use rights to rural households. Legal recognition of private land ownership was delayed until early 1996. The land transfer program was followed by a land leasing program for the land that remained in government ownership, that was also introduced in 1996 and managed by municipal governments. The combined effect of both programs has been to provide land ownership or lease rights to private entities for most of the arable land in the country, with 57 percent in private ownership and 27 percent under lease from the Government. However, the Government still owns almost three quarters of all agricultural land, including most pasture lands and meadows and 43 percent of all arable land and land under perennials. While Georgia’s initial land distribution program was very inclusive, the leasing program has had a tendency to increase inequalities in rural areas. Surveys have shown that a household’s ability to lease land from the state reserve increases the household’s land access and thus its income significantly, but this possibility is only open to a relatively small number of households (about 4 percent) – often those with good connections.  

36. The legal framework for the land market also differs among the three countries. In Moldova, both sales and rentals have been allowed since 1996 (Table 1). In Georgia, government owned land can be leased, but it is not clear whether private land can be leased and the sale of land is legally allowed, since 1996, but is quite restricted (Table 1). In Kyrgyz, since 2001 sales have also been allowed with restrictions (e.g., land can only be sold to members of the same community) and leasing is possible. However, anecdotal evidence from both Moldova and Kyrgyzstan suggests that the lessor has more bargaining power than the lessee and that rental contracts are not always equitable or transparent (Table 1).

10 World Bank, 1999a
### Table 1: Legal Framework for Land Transactions

<table>
<thead>
<tr>
<th>Country</th>
<th>Legal framework for private land ownership</th>
<th>Restrictions on rental markets</th>
<th>Restrictions on sales market</th>
<th>Do local registries exist?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MOLDOVA</strong></td>
<td>Legally possible since 1996.</td>
<td>Leasing is allowed although legal procedures are not uniformly understood or applied. Households tend to lease land back to large restructured corporate farms.</td>
<td>Land market transactions have been legally possible since the first land certificates were issued in 1996. Almost 2000 sale and purchase transactions completed as of 1999.</td>
<td>Under development</td>
</tr>
<tr>
<td><strong>GEORGIA</strong></td>
<td>Under the 1996 &quot;Law on Agricultural Land” private ownership of land was allowed.</td>
<td>The Government issued the law on “The Leasing of Agricultural Lands of 1996,” which permits the leasing of all remaining agricultural land under government control to private individuals or legal entities. In some respects, the land leasing law achieved its objectives. It provided a low cost mechanism for farmers to acquire land use rights through leases priced at the same rate as the land tax. As a result, there was a very rapid transfer of land into private hands, and total agricultural output increased significantly on that land as a result. Land is leased from the state-owned land reserve, which is managed by the district authorities.</td>
<td>The sale and purchase of land is permitted under the law, but is restricted by the State Land Management Department, which requires that all land in a sakrebulo be registered (to ensure that no individual has more than 1.25 ha of land) before any land sales can occur. This restriction impedes the formation of land markets.</td>
<td>Under development</td>
</tr>
<tr>
<td><strong>THE KYRGYZ REPUBLIC</strong></td>
<td>1998 referendum allowed for private land ownership</td>
<td>Rental markets are relatively free: land can be rented to anyone. However, land leased for periods of longer than three years must be registered at the rayon GosRegister office. The registration process is essentially the same as for that of purchased land, and is relatively costly for poor farmers. Most therefore avoid this by leasing land for shorter periods (typically one year). Because leasing arrangements tend not be registered in writing, there are substantial opportunities for disagreements to emerge. Households renting out land are typically poorer farmers, while households renting in land are better off farmers.</td>
<td>In 1998 a package of land laws became effective. The &quot;Law on Land” introduced a moratorium on sales of agricultural land, owing to concerns that potentially poorly functioning markets might lead to concentration of ownership and other negative social consequences. This limits opportunity to use land for mortgages. In 2001, the moratorium on land sales was lifted, but significant limitations on the ability to mortgage agricultural land remain. Also, only community residents can purchase land.</td>
<td>Registration will be conducted at the local level using a network of 50 offices.</td>
</tr>
</tbody>
</table>


37. **Agro-enterprise reform.** Although a large share of agro-processors were privatized in all three countries, several large scale processors remain in state hands and continue to operate inefficiently. Because they did not operate under hard budget constraints, even those processors that were privatized were generally not disciplined. They thus continued to accumulate large arrears, avoided serious restructuring and perpetuated weak management practices. In some cases, previously state owned enterprises that have been privatized continue to receive preferential treatment. For instance, in the Kyrgyz Republic, the government allows recently privatized tractor and chemical input companies to sell subsidized tractors and fertilizer at below market prices.

38. **Financial sector reform.** While Moldova and the Kyrgyz Republic (and more recently, Georgia) have sought to reform their rural financial institutions with donor support, the systems in all three countries remain shallow.¹¹ The reformed rural lending

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¹¹ In contrast to formal financial markets, informal markets appear to be more vibrant. For example, household survey data from the Kyrgyz Republic show that almost half of all rural households had access
schemes have proved successful, but they have also shown that the development of effective and sustainable rural finance systems to serve small farmers will take time and will depend upon the extent to which the entire financial system in each country is strengthened.

- In 1997, the Government established the Kyrgyz Agricultural Finance Corporation (KAFC) with donor assistance. The KAFC has about 30,000 beneficiaries, which represent about 4 percent of the rural population (World Bank, 2002c)

- Moldova discontinued preferential credit with subsidized interest rates for agriculture in 1993, and in 1997 moved to establish the Rural Finance Corporation with donor support. Since then the RFC has provided financing to a continuously expanding network of Savings and Credit Associations serving small scale farmers and rural entrepreneurs. As of 2001, about 30,000 farmers and rural entrepreneurs had benefited from short terms loans, with 80 percent of borrowers being private small farmers.

- In Georgia, the Government is currently working with the World Bank, IMF and bilateral donors to restructure Agrobank and strengthen the financial sector and improve its viability and performance. A number of credit unions and other non-bank financial institutions have been established over the past few years to help provide financing to small scale farmers.

III. Rural poverty – outcomes and determinants

In this section, the focus shifts from aggregate growth and sectoral policy to the household, and in particular, to analyzing the evolution of household welfare in the three countries as well as the key determinants of this welfare. The analysis confirms that agricultural growth was critical for rural poverty reduction. The agricultural growth described above led to a reduction in rural poverty in Kyrgyzstan as it increased the value of land, labor and livestock assets of rural to credit in 2001, but the majority of loans appear to have been small and come to have from the informal sector.

![Figure 11: Evolution of Rural and Urban Poverty Rates in Georgia](image-url)
households. Households were then able to “cash-in” on the increased value of their assets through their participation in rural labor, land and output markets, which was significantly associated with higher household welfare.

In contrast, the narrow nature of growth in Georgia, combined with the stagnation of the agricultural sector undermined the ability of rural assets (most notably land and labor) and markets, to raise the welfare of rural households, which deteriorated during the study period. Only livestock assets were associated with higher consumption levels in rural Georgia. In Moldova, the overall recession led to the deterioration of the welfare of rural households through 1999, which was offset only partially by the decrease in inequality. As in Georgia, land assets were not associated with higher household welfare, in part due to the lack of growth in agriculture. While both labor assets and market participation were positively linked to household welfare in Moldova in the late 1990s, their overall levels for rural households declined, reflecting the contraction of the rural economy that was occurring at this time.

Trends in rural poverty and inequality
41. This sub-section examines the evolution of rural household welfare and inequality in the three countries between 1997/98 and 2000/01. The analysis confirms that households in rural Kyrgyzstan saw their welfare improve more than households in rural Georgia or Moldova. In the Kyrgyz Republic, rural poverty declined at 8 percent a year (Figure 12), and the severity of rural poverty also decreased (Annex Figure B2). In contrast, the economic growth that occurred in Georgia was not experienced at the household level and rural poverty increased by 16 percent per year (1997-2000) (Figure 11), and the severity of rural poverty also grew (Annex Figure B1). In Moldova, per capita expenditures in rural areas paralleled growth trends and declined through 1999 and then increased in 2000 and 2001 (Figure 13). During the initial period rural poverty grew by 25 percent per year, and then declined by an average of 7.7 percent per year in 2000-01. The severity of poverty also followed similar trends (Annex Figure B3).

42. To what extent did distributional changes or growth drive the poverty trends discussed above? In the Kyrgyz Republic, the decline in rural poverty reflected mainly growth, as the expenditure gini declined only slightly during this period (Figure 14). In Georgia, the rise of rural poverty reflects an increase in inequality (the gini rose) as well as the narrow nature of economic growth, which was not transmitted to rural households. In Moldova, inequality decreased during the study period, which suggests that distributional changes tempered the impact of the recession on rural households.

43. Neither the poverty rate nor the gini coefficient fully capture how per capita expenditures throughout the expenditure distribution fared and how the expenditures of the non-poor evolved during the late 1990s. Alternatively stated, to what extent were the changes in per capita expenditures pro-poor or pro-rich? In general, in Moldova the evolution of per capita expenditures in rural areas was pro-poor, while in Georgia the reverse was true; in the Kyrgyz Republic, the expenditures of households in the upper middle class experienced slightly higher growth, but in general, the pattern of growth was distributionally neutral.

44. These trends are illustrated in figures 15 through 17, which show the average rate of change of per capita expenditures during the 1997/98 to 2000/01 period for each expenditure percentile. On average, per capita annual expenditures of the total population declined in Georgia and Moldova by about 5 and 10 percent per year, respectively. In contrast, in the Kyrgyz Republic, per capita annual expenditures of the total population grew at an average of 3 percent per year. However, in Georgia the decline in per capita expenditures was experienced more sharply by rural individuals in the bottom two quintiles (which approximates the rural poverty rate), while in Moldova, the recession was pro-poor in rural areas to the extent that per capita expenditures of the first six deciles (which approximates the Moldova rural poverty rate) experienced smaller income declines than those at the higher income deciles. In the Kyrgyz Republic the average expenditure changes of rural individuals were roughly equal across expenditure deciles, with the non-poor (excluding the very wealthy in the top decile) experiencing slightly higher rates of growth than the poor and especially the extreme poor.

Source: Household Budget Surveys and World Bank estimates

Figure 16: Change in per capita expenditure by percentile for Kyrgyz Republic 1998 - 2001

Source: Household Budget Surveys and World Bank estimates
Determinants of changes in household expenditures

45. This sub-section seeks to explain the changes in the welfare of rural households outlined above, by analyzing the relationship between household characteristics and per capita expenditures. The variables used for the analysis are human, physical, financial, infrastructure and market assets, as well as regional and time dummy variables. The analysis is based on data drawn from national household budget surveys. Annex D presents the theoretical model that underpins the analysis and the detailed econometric results are found in Annex E.

Overview of key drivers

46. The analysis of the key drivers of change in rural welfare highlight several positive factors acting on rural households in the Kyrgyz Republic that were not present to the same extent in Georgia or Moldova. It also suggests that the latter countries had stronger negative external forces affecting household welfare than the Kyrgyz Republic. Table 2 provides a summary decomposition of the role of the above variables in affecting per capita expenditures. It reflects the combined effect of the variables’ impact on per capita expenditures (i.e., the regression coefficient) and the change in the level of the

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Source: Household Budget Surveys and World Bank estimates

The information used for the analysis below is taken from the Household Budget Surveys (HBS) conducted in Moldova between 1997 and 2000 (excluding Transnistria), in Georgia between 1996 and 2000 and in the Kyrgyz Republic between 1998 and 2001. In the case of the Kyrgyz Republic, household expenditures include the estimated value of home-produced food items, and purchases of food and non-food items and services. Expenditures on durables are not included, instead the estimated use value of durables the households own, with the exception of housing are included. Also, expenditures on household business items were excluded. In Georgia and Moldova, most/all (respectively) expenditures for consumer durables were excluded, but their use value was not calculated as an expenditure. The value of home produced goods is included.
stated variable during the survey period. Only variables with significant coefficients are presented.

47. The table shows that the Kyrgyz Republic achieved a small percentage gain in rural welfare (i.e., expenditures) over the relevant survey period, but both Georgia and Moldova (and especially the latter) experienced substantial deteriorations. The largest adverse factor in all three countries, but especially Georgia and Moldova was the difficult external environment, as reflected by the time dummies. The increase in household welfare in the Kyrgyz Republic reflects gains from livestock, land and labor/human assets, and market access. In Georgia, small gains in household welfare due to increases in livestock and financial assets were not able to offset the negative impact on household welfare of the external environment, the deterioration of infrastructure assets and the increase in household size. Similarly in Moldova, the large increase in welfare due to the decline in the average household size could not offset the negative forces due to the drop in financial, infrastructure and market assets as well as the deterioration of the external environment.

Table 2: Decomposition of Expenditure Change based on Fixed Effects Estimates (Rural)

<table>
<thead>
<tr>
<th></th>
<th>Expenditure Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure on Non-Durable Goods and Services per capita</td>
<td>-13.8</td>
</tr>
<tr>
<td><strong>HUMAN ASSETS</strong></td>
<td></td>
</tr>
<tr>
<td>Household size (log)</td>
<td>-2.2</td>
</tr>
<tr>
<td>Number of household members between the ages of 18-60yrs (log)</td>
<td>n/a</td>
</tr>
<tr>
<td>Mean years of education 18 or older (log)</td>
<td>n/a</td>
</tr>
<tr>
<td>Household members mean age (log)</td>
<td>n/a</td>
</tr>
<tr>
<td>Female head of household (dummy)</td>
<td>n/a</td>
</tr>
<tr>
<td>Education of older than 17 (log)</td>
<td>0.3</td>
</tr>
<tr>
<td>Labor per capita (log)</td>
<td>n/s</td>
</tr>
<tr>
<td>Age of head of household (log)</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>PHYSICAL ASSETS</strong></td>
<td></td>
</tr>
<tr>
<td>Amount of land owned (log)</td>
<td>n/s</td>
</tr>
<tr>
<td>Ownership of automobile (dummy)</td>
<td>n/a</td>
</tr>
<tr>
<td>Ownership of moped (dummy)</td>
<td>n/a</td>
</tr>
<tr>
<td>Availability of pigs (log)</td>
<td>n/a</td>
</tr>
<tr>
<td>Availability of poultry (log)</td>
<td>n/a</td>
</tr>
<tr>
<td>Animal equivalents (log)</td>
<td>5.9</td>
</tr>
<tr>
<td><strong>FINANCIAL ASSETS</strong></td>
<td></td>
</tr>
<tr>
<td>Other transfers per capita (log)</td>
<td>2.9</td>
</tr>
<tr>
<td>Pension and retirement income per capita (log)</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>MARKET ACCESS</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n/a</td>
</tr>
</tbody>
</table>
Market access to livestock output | n/a | n/a | 1.04
Labor market participation | N/s | n/s | -0.39
Agricultural sales (dummy) | N/s | -0.94 | n/a

**INFRASTRUCTURE**
- Access to gas @ dwelling @ end of 1998: N/a n/a -1.24
- Phone: -10.7 n/a n/a

**EXTERNAL EFFECTS**
- -35.6 -38.32 -8.49

**UNEXPLAINED RESIDUAL**
- 26.3 -6.07 -7.11

The change represents the logarithmic difference between the mean of each variable for the first and last four quarters multiplied by its corresponding regression coefficient.

N/a refers to where the data for the said variable was not available and N/s refers to insignificant data.

Source: Lopez and Melo, 2002.

### Human assets

48. Human assets, notably education and household size, are strongly associated with household welfare in all three countries (Annex E1a, E2c, E3a). As expected, household size has a large and inverse relationship with household welfare and education has a positive, but somewhat smaller relationship. Household size declined during the survey period in Moldova and initially in the Kyrgyz Republic (through 2000) and rose in Georgia. The consistent decline in rural household size is the single most important positive force acting on per capita consumption in Moldova during this period (table 2). Education was positively correlated with household welfare and in the Kyrgyz Republic, this relationship was higher and more significant in rural areas than in urban areas (annex E 2.d). While education levels are quite high in all three countries compared to developing countries in general, people over 17 in rural areas have about two to three years less schooling than their counterparts in urban areas. In all three countries, the distribution of schooling across expenditure quintiles is quite homogenous among rural households (Annexes C1, C2 and C3).

49. In the Kyrgyz Republic and Moldova, labor market assets (i.e., the number of household members between 18 and 60) and age of the household head also had a positive relationship with household welfare. The positive coefficient for labor assets suggests that these assets were constrained in these two countries, and implied the existence of unexploited income generating activities (either on the farm or off the farm). Labor assets increased in Georgia and Kyrgyzstan: while this increase helped households in the Kyrgyz Republic, it did not appear to improve the economic welfare of households in rural Georgia, given the non-significance of the labor asset coefficient (Annex E1a). There was also an inverse relationship between gender of the household head and per capita expenditures in the Kyrgyz Republic, while in Moldova the gender of the household head was insignificant.
Among the physical assets analyzed in the regressions, land contributes little to rural household welfare. This suggests that land is not the most constrained asset for rural households and that its overall productivity (with respect to household welfare) is low. Land assets had a small and only weakly significant relationship with per capita expenditures, depending on the country, the econometric model used, and the tenure system. Only in the Kyrgyz Republic was the relationship between land and per capita expenditures robust, but even there it remained low, accounting for less than 3 percent of the total change in household expenditures (which was significantly less than at the contribution of livestock assets or human assets) (table 2). In Georgia, there was some evidence that jointly used land (referring mainly to pasture land) was positively related to per capita expenditures, while in Moldova there was also some evidence that jointly owned (i.e., managed under collective arrangements) and especially privately owned land was positively correlated to household welfare, but in neither case were the results robust across different econometric specifications. While the positive relationship between land assets and household expenditures has been noted in other studies for the Kyrgyz

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13 In Georgia, the Verbeek and Nijman model was preferred given its ability to assess the effect of variables on the pseudo panel (constructed using gender of household head, nationality and age, and household’s region and type of location). When using the random effects model (appropriate for assessing the expenditures using cross sectional data) or the fixed effects model (appropriate for looking at the impact of changes in independent variables for a given household), land either privately owned (significant in the random effects model) or jointly owned (significant for both the fixed and random effects models) was significant (Annex E1a and b). In the case of Moldova, land either privately or jointly held was only significant in the random effects and not for the fixed effects model (the Verbeek and Nijman model was not necessary in Moldova, as there was a real panel available) (Annex E3a and b).
Republic, the lack of a strong relationship between land assets and household welfare is not unusual in transition and developing economies.14

<table>
<thead>
<tr>
<th>Table 3. Ratio of land distribution for top to bottom quintile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Private</td>
</tr>
<tr>
<td>Collectively/jointly owned</td>
</tr>
<tr>
<td>Leased</td>
</tr>
<tr>
<td>Average for all tenure types</td>
</tr>
</tbody>
</table>

Source: Household Budget Surveys (HBS)

51. The relatively insignificant contribution of land to household welfare, particularly in Georgia and Moldova, may reflect the relatively equal distribution of land across households, the weak incentive framework, the low productivity of land and/or the fact that the data do not reflect the quality of the land (including access to irrigation).15 In this connection, several specific features with respect to land assets bear noting. First, the relatively equal distribution of land across expenditure quintiles in the Kyrgyz Republic and Moldova and the pro-poor distribution in Georgia suggests that, at an aggregate level, there is not a strong correlation between access to land assets and household welfare. The ratio of land holdings (all tenure types) for the top-to-lowest expenditure quintile is 1.02 for Moldova and 0.94 for the Kyrgyz Republic, suggesting a highly equal distribution of land, while in Georgia the ratio is 0.44, indicating the households in the bottom quintile have 60 percent more land than households in the top expenditure quintile. For rural households in the bottom quintile in Georgia and Moldova, their relative land access with respect to households in the top quintile has actually increased since 1997. In Kyrgyzstan the reverse has been the case and households in the top (wealthiest) quintile have seen a relatively larger increase in land access than households in the bottom quintile, reflecting in part an increased in land rentals by wealthier households (box 3).

52. Second, the weak significance of the relationship between land access and expenditures is also indicative of the low productivity of land, which is constrained by several factors in the three countries:

14 The Kyrgyz Poverty Assessment (World Bank 2002a) also found a very low, but significant correlation between expenditures and land assets. In Bulgaria, land ownership had virtually a negligible impact, while farm capital and livestock played a significant role, perhaps reflecting the fact that land sales were still difficult (Lopez and Melo, 1999). In Romania land had a weakly positive and significant relationship with consumption expenditures, while labor and livestock assets had a stronger positive correlation. Part of the low productivity of land in Romania was thought to reflect imperfections in the land and capital markets, as well as to the distribution process which favored older farmers with lower productivity than younger farmers (Lopez and Thomas, 1999).

15 Bucknall et al (2002) also find a significant relationship between land assets and income in Kyrgyzstan, which is slightly stronger than the elasticity found in this study, perhaps reflecting the fact that irrigation access is reflected in the model.
• low yields, particularly in Georgia and Moldova, caused at least in part by poor access to inputs and irrigation as well as climatic shocks (see para. 17);

• the extremely small size of private plots, which may mean that landholdings are too fragmented to allow for economies of scale in production – the average cultivated area per household is around one hectare in Georgia and the Kyrgyz Republic and just over half a hectare in Moldova (Annex C1d, C2d and C3d);

• the lack of support services (such as credit, market information, agricultural support services), as the development of these services was a secondary priority after the land reform and privatization programs, particularly in Georgia and Moldova; and, 16

• an allocation of land that does not maximize its marginal productivity, as land was allocated by fiat and restrictions on land exchanges and rentals were only recently, and some in cases only partially, lifted. According to available data, only a small fraction of land is sold or rented across households, reflecting in part institutional restrictions on the land market (Box 3 and Figures 19-21).

53. Third, the overall profitability of agriculture remains low particularly in Georgia and Moldova, which undermines the returns to land ownership. The low profitability of agriculture reflects the poor productivity of the sector, declining domestic food prices, a reduced demand for exports to Russia, and a deteriorating agricultural price index (agricultural prices compared to industrial prices) (see para. 19 and figures 8-10).

**Box 3: Emerging land tenure patterns**

**Most of the land used is privately owned.** About 80 –90 percent of the land used in Georgia, Kyrgyz Republic and Moldova is privately owned by rural households (2000/01). The share of land used that is leased has increased in the past five years (in Georgia and the Kyrgyz Republic, as no data are available for Moldova). In Georgia, land rentals rose from 3 percent of total land used by household on average in 1997 to 11 percent in 2000, while in the Kyrgyz Republic, they increased from 4 percent in 1998 to 11 percent in 2001. In addition, households use land where ownership is joint with either a former cooperative that has been privatized (Moldova) or a local community (as is the case for agricultural land in Georgia). In the case of the Kyrgyz Republic, households using “jointly owned land” do not have clear title over this land. The share of land managed jointly by farmers has increased in Moldova and decreased in Georgia (slightly) and in the Kyrgyz Republic (figures 19-21).

**The analysis suggests that wealthier households tend to rent more land than poorer households.** While the distribution of land owned is equitable, or favors households in the bottom quintile in the case of Georgia (see para. 50), households in the top quintiles rent more land than their counterparts in the bottom quintile. In 2001, households in the lowest quintile in the Kyrgyz Republic rented .05 ha,

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16 In the Kyrgyz Republic, credit access was not significant and nor was income from capital assets (as they were in Georgia and Moldova), suggesting that the relatively higher productivity in Kyrgyz may in part be due to a smaller capital constraint.
compared to 0.1 ha for households in the top quintile, or 50 percent less, while in 1998, the amount of land rented was relatively equal across the expenditure quintiles. In Georgia in 2000, households in the bottom quintile rented on average 0.09 ha, compared to 0.18 ha for households in the highest, or 50 percent less, while in 1998, the lowest quintile rented 65 percent less land than the top quintile.

Source: Household Budget Surveys (HBS)

Livestock assets are significantly and positively linked to household welfare in Georgia and the Kyrgyz Republic (data are not available for Moldova) (Annexes E1a and E2a). The importance of livestock in Georgia, and to a lesser extent in the Kyrgyz Republic, may reflect the fact that these assets can be easily sold or liquidated, and are less affected by institutional barriers to trade compared to land assets. In addition, livestock provide an easily accessible store of wealth, which is important in periods of shocks and when financial markets are weak.

Figure 19: Georgia - Land Tenure Share by Year

Source: Household Budget Surveys (HBS)

Figure 20: Kyrgyz Republic - Land Tenure Share by Year

Source: Household Budget Surveys (HBS)
Ownership of livestock increased significantly for rural households in the Kyrgyz Republic, and to a lesser extent in Georgia, and thereby supported rising rural household welfare in both countries (Annexes C1 and C2). In Georgia, livestock assets contributed about a positive 6 percent to the per capita expenditures of rural households between 1996 and 2000, while in the Kyrgyz Republic they accounted for almost 10 percent of the positive change in expenditures (see Table 2). However, most of the expenditure gains from increased livestock assets accrued to the wealthier households. In Georgia, the top expenditure quintile experienced the largest consumption gains from increased livestock assets, as their livestock assets increased by almost 30 percent compared to 14 percent for the households in the bottom quintile; in the Kyrgyz Republic, households in the lowest quintile owned no pigs (the livestock asset most significantly linked to per capita expenditures) throughout the survey period, while households in the top quintile doubled the number of pigs they owned.

Financial assets

Financial assets (asset income, remittances and other transfers) were significantly correlated with household welfare in Georgia and Moldova, but the correlation was barely significant in the Kyrgyz Republic (Annex E1a, E2c and E3a). This lack of significance of financial income for household welfare suggests that capital is not the most constrained asset in the Kyrgyz Republic. In addition to the sharp increase in income from financial assets, the apparent lack of a capital constraint among rural households may also reflect the high share of households in the Kyrgyz Republic receiving formal and non-formal credit across all expenditure quintiles (on average, almost 50 percent of rural households received credit; although the average loan size was small, it increased significantly with the per capita expenditure level of the household (World Bank 2002a)).

Rural households in Kyrgyz Republic saw their financial income increase sharply, reflecting an average annual 66 percent increase in asset income between 1998 and 2000 (transfer income actually declined by about 10 percent per year during this period).
Overall, income from social benefits and transfers declined during this period for rural households, and particularly for households in the bottom quintiles in Kyrgyzstan and Georgia.

- In Moldova, where the poorest households were protected, their social transfers actually increased, which may partially explain why the recession in Moldova was pro-poor (see figure 17). In Moldova, the income from social transfers of households in the top quintile decreased by 73 percent, while it almost doubled for households in the bottom quintile.

- In Georgia, rural households in the bottom quintile experienced a decline in transfers, while transfers to the top quintile increased. Between 1997 and 2000, the value of social benefits going to the bottom quintile fell by half, but rose by almost 15 percent for the top quintile.

- In the Kyrgyz Republic, while transfers declined for all quintiles, the top quintile was somewhat protected. Between 1998 and 2000 transfers to the bottom quintile declined by 7 percent, but by only 1 percent for the top quintile.

In general, social transfers were much higher for urban households than for rural households, except in Moldova. The value of transfers received by urban households in 2000 was double that of rural households in Moldova and Georgia, and 20 percent greater in the Kyrgyz Republic (2001). Moreover, the decline in transfers to rural households between 1997 and 2000 was larger for rural than for urban households, except in Moldova. In Georgia, urban households saw social benefits decline by 15 percent, while rural households saw a decline of 30 percent. Similarly in Kyrgyzstan, social benefits to urban households fell by 5 percent between 1998 and 2001, but the decline was 10 percent for rural households. In Moldova, however, rural households were more protected than urban households from the cut in social benefits; they declined by only 2 percent compared to a fall of 20 percent for urban households.

**Access to infrastructure**

Access to infrastructure assets tended to be positively associated with household consumption in Georgia and Kyrgyzstan (Annexes E1a, E2c, E3a) and insignificant in Moldova. Rural households face particularly limited access to infrastructure assets compared to their urban counterparts, and rural households in Moldova and the Kyrgyz Republic have less access to infrastructure than their counterparts in Georgia (Table 4). Except for telephones, access to infrastructure is fairly uniform across expenditure quintiles in all three countries.

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18 While urban poverty is greater than rural poverty in Georgia (see figures 11-13), this is not the case in the Kyrgyz Republic or Moldova.
19 The importance of infrastructure assets was particularly strong in the random effects models, which was more likely to capture the differential impact of infrastructure assets than the fixed effects model, which only assessed the impact of intra-household changes during the study period.
Access to infrastructure is considered important for reducing the demand on labor for household chores and in improving health outcomes (thereby in both cases raising the productivity of household members), as well for facilitating integration into the regional economy. Over time, household access to some infrastructure assets increased (phones, hot water and sewage for Kyrgyzstan; water and sewage for Georgia) while access decreased for other assets (gas in Kyrgyz Republic; phones and gas in Georgia) (Annex C).

Table 4: Access to Infrastructure/Utilities in 2000
(percent of population with access)

<table>
<thead>
<tr>
<th></th>
<th>Georgia Rural</th>
<th>Georgia Urban</th>
<th>Moldova Rural</th>
<th>Moldova Urban</th>
<th>The Kyrgyz Republic Rural</th>
<th>The Kyrgyz Republic Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phones</td>
<td>8</td>
<td>56.3</td>
<td>21</td>
<td>69</td>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td>Water</td>
<td>78</td>
<td>93.7</td>
<td>3</td>
<td>86</td>
<td>1</td>
<td>59</td>
</tr>
<tr>
<td>Gas</td>
<td>36.2</td>
<td>55</td>
<td>5</td>
<td>68</td>
<td>29</td>
<td>71</td>
</tr>
<tr>
<td>Sewage</td>
<td>26.8</td>
<td>86.9</td>
<td>2</td>
<td>78</td>
<td>19</td>
<td>77</td>
</tr>
</tbody>
</table>

Source: Household Budget Surveys (HBS)

Market participation

Market participation in agricultural markets was positively linked to welfare in Moldova and the Kyrgyz Republic, while access to agricultural product markets did not significantly affect rural household welfare in Georgia. This indicates that rural product markets were not effective in Georgia in transmitting the overall economic growth to rural households, reflecting the unattractive incentive framework for agriculture and/or the presence of inefficient agricultural markets (see para. 19). Overall, just over half of the rural households in Georgia and the Kyrgyz Republic participated in agricultural and livestock markets, respectively, while only one quarter of the households participated in Moldova (Table 5). During the late 1990s, participation rates in agricultural and livestock markets increased in Georgia and especially Kyrgyz Republic, while they declined slightly in Moldova. As a result, despite the positive relationship between market access and household welfare in Moldova, market access actually had a negative impact on overall household welfare between 1997 and 2000 (see Tables 2 and 5). In general, market participation in agricultural and livestock markets rises by expenditure quintile (Figures 22-24).

In contrast to agricultural product markets, participation in input markets in the Kyrgyz Republic (the only country with data on input use), was not significantly related to household welfare (Annex E2c). In general, purchasing inputs tends to be positively associated with household welfare. In this case, their lack of significance suggests a

20 In Moldova and Georgia, instrumental predicted variables were used to assess the impact of market access on household expenditures, reflecting the fact that participation rates do not necessarily indicate access rates, as households with access may choose not to participate. In the case of the Kyrgyz Republic, predicted variables for market involvement were not used.

21 In the Kyrgyz Republic, participation rose across expenditure quintiles for livestock (which was the significant product market) but not for wheat and vegetables (which were not significantly associated with expenditures).
number of possible explanations—households purchasing inputs are not using them productively, the quality of the inputs purchased is not high, households are not accurately reporting their purchases of these inputs, or the marginal revenue from the use of inputs is not consumed, but saved or invested. The percentage of households purchasing fertilizer increased by 50 percent during this period, but overall it remained low at 25 percent in 2000 (Table 5). The share of households purchasing livestock inputs remained constant over this period, and was higher among households in the upper expenditure quintiles.

63. Participation in labor markets was only significant and positive for household welfare in the Kyrgyz Republic, and was insignificant in Moldova and Georgia. Participation in labor markets was relatively high in Kyrgyzstan at 47 percent (2001) compared to 31 percent and 40 percent (2000) of all households Georgia and Moldova, respectively (Table 5). This suggests that both labor assets and labor market participation were constrained in Kyrgyzstan and that overall productivity of rural labor was higher than the other two countries (see figures 5-7). The lack of significance of labor market participation for Moldova and Georgia could suggest low wages, or declining hours of employment (since participation was measured with a dummy variable), or high transactions costs. There are signs of significant regional and ethnic clustering in the Georgian labor market, suggesting that it is segmented and not necessarily efficient (Annex E1d).

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Georgia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Market</td>
<td>1</td>
<td>1.5</td>
<td>4.6</td>
<td>5.5</td>
<td>na</td>
</tr>
<tr>
<td>Labor Market</td>
<td>32</td>
<td>31.2</td>
<td>32</td>
<td>31.2</td>
<td>na</td>
</tr>
<tr>
<td>Agricultural Sales</td>
<td>53.6</td>
<td>60.3</td>
<td>61.8</td>
<td>57</td>
<td>na</td>
</tr>
<tr>
<td><strong>Moldova</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Sales</td>
<td>26</td>
<td>24</td>
<td>22</td>
<td>23</td>
<td>na</td>
</tr>
<tr>
<td>Labor Market</td>
<td>51</td>
<td>49</td>
<td>46</td>
<td>40</td>
<td>na</td>
</tr>
<tr>
<td><strong>Kyrgyz Republic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock output</td>
<td>na</td>
<td>54</td>
<td>59</td>
<td>53</td>
<td>60</td>
</tr>
<tr>
<td>Livestock input</td>
<td>na</td>
<td>16</td>
<td>13</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Fertilizers</td>
<td>na</td>
<td>17</td>
<td>16</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td>Labor market</td>
<td>na</td>
<td>49</td>
<td>44</td>
<td>45</td>
<td>47</td>
</tr>
<tr>
<td>Renting-in land</td>
<td>na</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>

*Source:* Household Budget Surveys (HBS)
Figure 22: Market Participation by Quintile in Georgia (2000)

Figure 23: Market Participation by Quintile in the Kyrgyz Republic (2000)

Figure 24: Market Participation by Quintile in Moldova (2000)
Determinants of household expenditure growth rates

64. The previous subsection explored how key household characteristics and exogenous events affected rural household welfare in the three countries over time, expressed in terms of changes in per capita expenditures. It thus provided policy-relevant information on the relative weights of factors contributing to the direction of change, whether adverse or beneficial. But strategies for rural poverty reduction are not only concerned with influencing the direction of change in a positive fashion (or arresting/reversing changes in a negative direction); they also need to prioritize actions that will most rapidly improve welfare. It is therefore important to know which factors are likely to accelerate the pace at which beneficial change can be expected to take place. In other words, the analysis needs to go beyond simply identifying which household characteristics are associated, ceteris paribus, with welfare gains (or losses), and see what can be said about which characteristics are associated, ceteris paribus, with the rate at which those gains (or losses) can be expected to take place over time.

65. This sub-section uses household panel data to briefly discuss how the variables already identified—human, physical, financial, infrastructure and market assets, and exogenous factors, as well as sub-national economic growth rates (based on the average oblast-wide growth of per adult equivalent monthly expenditures) —affect the rate of growth of the chosen welfare measure, per capita expenditures. It also analyzes how these household assets affect the relationship between sub-national economic growth and the rate of change in rural household per capita expenditures. Hence the analysis evaluates which household characteristics accelerate the growth of per capita expenditures, as well as which household characteristics are important in linking growth to a faster rate of increase in per capita expenditures (interaction terms). To analyze the specific contribution of the household variables to the growth of per capita expenditures, the net impact of both the simple coefficients and the coefficients for the interaction terms is considered. The analysis was only carried out for Georgia and Moldova (see Annex Tables E1c and E3c).

66. What factors are positively associated with raising the rate of growth of rural per capita expenditures? The key variables related to an acceleration of per capita expenditures were access to agricultural and labor (Moldova only) markets, infrastructure assets and to jointly held land (Georgia only). Not surprisingly given aggregate trends, sub-national economic growth did not accelerate an improvement in household welfare in rural Georgia, as it was able to do so in rural Moldova.\(^{22}\)

67. Access to jointly held land (e.g. communally held pasture land) in Georgia was important in speeding up the rate of increase of per capita expenditures, while land assets of any tenure type were not significant in Moldova. The importance of jointly held land in Georgia may reflect the importance of livestock assets in per capita expenditures and the use of this land for pasture. As mentioned earlier, households in the bottom quintile

\(^{22}\) While in both cases the coefficient for regional growth was positive, it was only significant for Moldova (Annex Tables E1c and E3b).
have relatively high levels of privately held land in rural Georgia, but households in the top quintile have more than twice as much jointly held land as households in the bottom quintile (2000).

68. With respect to other variables, access to markets and phone service in both countries helped to increase the rate of growth of rural per capita expenditures. In Moldova, access to agricultural product and labor markets was significant in raising the rate of growth of expenditures, while in Georgia, only agricultural product markets were significant in channeling growth to accelerate improvements in rural household welfare. The fact that labor market access did not accelerate growth underscores the fact that aggregate economic growth driven by the services sector (which is labor intensive) was not transmitted to rural households. Telephone service may also facilitate integration into the regional economy and improved access to market information.

69. Several factors also served to depress the rate of growth of per capita expenditures. In Georgia, households that were Georgian, Azeris, or Armenian tended to benefit less from growth than rural households of other nationalities. In Moldova, household size had a negative impact on the ability of the household to accelerate per capita income growth, while older and female headed households were better placed. Households receiving transfers (public and private) and asset income had lower rates of growth of per capita expenditures, suggesting that transfers were targeted to households with low rates of expenditure growth, which is likely to be the case for pensioners, who receive a relatively large share of transfers.

IV. Conclusions and recommendations

70. This section synthesizes the main poverty, growth and reform trends in each country, and highlights key country-specific challenges for the future. It concludes by offering recommendations on land policy, market development, social sector policy, and some priorities for data collection and further analysis.

Lessons learned and challenges ahead

71. Moldova: Out of the three countries, households in rural Moldova experienced the largest drop in per capita expenditures (11 percent/year) and also experienced the harshest economic environment, with aggregate growth dropping at 2.5 percent/year. The agricultural sector declined at an annual rate of 4.5 percent/year, due to falling demand (mainly export demand), low productivity (related to a shift towards low value subsistence crops and reduced use of chemical inputs) and climatic shocks. Starting in 2000, both economic growth (including growth in agriculture) and poverty rates improved.

72. On the positive side, the rural poor were relatively well protected as their expenditures fell by a smaller share than those of households at the higher expenditure quintiles. As a result, the rural expenditure gini, which is relatively high in Moldova, declined. But the most significant change that raised the welfare of rural households was
the decline in average household size between 1997 and 2000 (reflecting in part high out-migration). The difficulties facing those remaining in rural areas were compounded by the fact that relatively few of their assets were effective in raising their expenditure levels; land assets, which had expanded during this period, were not significant, and while access to agricultural markets was linked to higher expenditures, the overall rates of market participation in Moldova declined in the late 1990s. Transfers, as expected, were positively associated with per capita expenditures, and transfers to the poorer households (1st quintile), actually increased during this period, compared to transfers to households in the upper expenditure quintiles (5th quintile). Market access (both agricultural and labor) was also important in helping rural households in Moldova to accelerate the growth in income (or reduce the rate of decline) of per capita expenditures during this period.

73. The challenges will be to reverse the shrinkage of rural markets experienced in the 1990s, to raise the productivity of land, and to rejuvenate the traditionally strong agro-processing industry—all of which are needed to ensure that continued growth is generated and transmitted to all rural households. Raising the productivity of land will require increasing the provision of support services to rural households, increasing investments in irrigation, supporting the development of rural land markets (rental and sale). The maintenance of a competitive exchange rate, finalizing the reforms of state agro-processing industries and creating a level playing field with new entrants will also be important for encouraging the export oriented agro-processing industry. Expanding access to rural infrastructure and improving the business climate will be important for supporting the development of rural agricultural markets.

74. Georgia: Economic growth was not sufficient to generate agricultural growth and redress rural poverty in Georgia. Despite GDP growth of 5.8 percent a year between 1996 and 2000, national per capita expenditures decreased by 5 percent a year during 1997-2000. Within the rural sector, the expenditures of the rural poor declined by an even greater amount than those of the non-poor, leading to rising rural poverty rates and inequality. A difficult external environment, the low productivity of land and labor assets, as well as a decline in government transfers to the rural poor, helped to worsen household welfare in rural Georgia during this period.

75. As in Moldova, the most important set of factors affecting rural household expenditures were those connected to the unfavorable external environment, including the Russia crisis, internal conflict, fiscal constraints, and climatic shocks. Also as in Moldova, key assets of the rural poor in Georgia—land and labor—were not significantly linked to higher per capita expenditures. While the distribution of private land favored the lower expenditure quintiles, the productivity of land assets was too low to have a positive impact on household expenditures. However, access to communally held public lands did allow rural households (particularly those at the higher end of the expenditure spectrum) to benefit more (and decelerate the decrease in expenditures) from subnational

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23 While per capita expenditures declined by more for non-poor urban households compared to their rural counterparts, the urban poor experienced lower declines in expenditures, and even some growth among the extreme poor.
growth. Transfers were also associated with higher rates of expenditures, although the absolute amount of transfers to poorer rural households declined faster than transfers to non-poor ones. Finally, livestock assets were associated with rising expenditures, although the largest increase in animal units during this period was experienced by the upper expenditure quintiles.

76. Access to labor and agricultural markets was not linked to higher expenditures, and overall participation rates in these markets remained constant in rural areas. However, access to agricultural markets was important in allowing households to benefit from sub-national growth and reduce the rate of decline in per capita expenditures. In the case of labor markets, there is some evidence of regionally or ethnically segmented labor markets, which may undermine their overall efficiency.

77. As in Moldova, the key challenges for enhancing household welfare will be to: (a) improve the productivity of land and labor; (b) compete the restructuring of state farms; (c) strengthen land market institutions and promote more transparency in the management of community public lands; (d) expand demand for agricultural products by maintaining a competitive exchange rate and completing agro-enterprise reforms, including improving the business climate in rural areas; (e) enhance output, factor and input market access and efficiency; (f) increase the ability of rural households to manage risk; and (g) better target safety nets to rural areas. The latter is particularly important given the relatively high and rising extent of inequality in rural Georgia.

78. Kyrgyz Republic: National per capita expenditures grew on average by 3 percent between 1998-2001, while the Kyrgyz economy grew at an average annual rate of 5.6 percent between 1996 and 2000. In general, the distribution of growth was broadly even in rural areas, although individuals in the upper middle class experienced above-average rates of expenditure growth. This phenomenon may have helped to create the conditions for increased economic activity in rural areas, as the middle classes are more likely to purchase local goods and services than the wealthiest households.

79. Growth was driven mainly by the agricultural sector, due to: (a) an increase in value added (as production switched from forage to domestically consumed food crops and given the relatively attractive incentive framework); (b) reduced vulnerability to less frequent climatic shocks (in part thanks to higher investments in irrigation earlier in the post-transition period); (c) a rising work force and for the most part rising labor productivity; and (d) rising land productivity (yields).

80. In contrast to the other two countries, the assets of the rural poor were productively linked to household welfare. Land and labor assets were significantly associated with higher per capita expenditures, as were education and labor and product market participation – all assets that were relatively equally distributed among the rural households. In addition, livestock assets, infrastructure (access to gas) and transportation assets (mopeds and cars) were associated with higher household welfare.
81. The key challenge for the Kyrgyz Republic will be to maintain agricultural growth, which has helped substantially to reduce rural poverty in recent years and to generate overall economic growth. Much of the favorable incentive framework that has supported recent agricultural growth reflects an increased domestic demand for food. Since this demand is not likely to continue expanding at the same rate, the country will need to develop export markets and agri-business opportunities. Hence, in Kyrgyzstan, completing agri-business reforms, ensuring a level playing field for new entrants, and improving the rural business climate should be a top priority. Maintaining a competitive exchange rate will also be very important to promote agricultural exports. To support continued increases in land and labor productivity in rural areas, the Government will need to: (a) continue developing the institutional framework for land markets; (b) re-assess its policy towards the distribution of fertilizer and tractors; and (c) complete the institutional framework for water management and continue investing in irrigation. To support market development and enhance the productivity of labor, the Government should improve access to social services and infrastructure in rural areas.

82. Over time inequality is likely to increase in the Kyrgyz Republic and the government will need to strengthen the targeting and effectiveness of its safety net programs for the chronic poor and vulnerable groups. In recent years, social transfers to rural households have decreased less for wealthier households than for poorer households. However, as land and labor markets become more efficient and deeper, some rural households may be left behind and it will be important to have targeted safety net programs in place to help this group—which in turn may imply decreasing the value of broad-based social transfers on fiscal grounds.

Policy implications and recommendations

83. Land. The finding that land is only weakly correlated with household welfare does not mean that land reform programs were not effective, but rather that they are not complete and that complementary public goods are required to ensure that privately held land assets achieve optimum levels of productivity.

84. The key policy challenge will be to support the development of land rental markets to facilitate a more efficient distribution of land and to address problems of land fragmentation (due to very small farm sizes). Many governments are hesitant to liberalize the land sales market, given concerns over distress sales and urban migration. In the first instance, however, it will not be necessary to liberalize land sales, as an efficient and transparent rental market is sufficient to lead to a more efficient use of land. Moreover, many of the institutions required for an effective land sales market—clear titles, easily accessible registries, the availability of standardized leasing contracts, market price information, etc—are also important for land rentals. Governments may also want to implement qualitative studies to deepen their understanding of rural households’ perceptions of land leasing and sales markets.
85. In all three countries, an important share of agricultural land remains in
government ownership at the national or community level.²⁴ When land is managed
locally, as is the case in Kyrgyzstan, rental fees provide important revenues to rural
community governments. In the case of Georgia and Kyrgyz, rented land, which is often
public land, was not correlated significantly with household welfare. In the case of
Georgia, access to this public land helps households to better benefit from subnational
growth, and access to public land was higher for the wealthier households than for poorer
households. The findings of this study lead to no conclusion about whether this state
owned land should be privatized. However, Governments should monitor and
disseminate widely who accesses public lands and under what conditions, and should
promote the use of open registries for publicly rented lands, as well as standardized
leasing contracts. In addition, governments should explore the use of multi-year or even
long-term leases for this land, to ensure adequate incentives for proper land management.
In the long-run, it is not likely to be efficient for large amounts of arable land to remain in
government ownership, but governments may wish to delay privatizing the land until
local communities develop alternative sources of revenue, and rural financial and land
markets deepen which would allow a broader access by rural households to this land.

86. About 15 percent of arable land in the Kyrgyz Republic and 40 percent in Georgia
and Moldova is cultivated under some collective structure, generally either a restructured
and privatized state farm/cooperative or some form of producers’ association. Often
former state farm/cooperative managers are in charge of these collective structures,
renting in land that has been distributed to rural households. While these collective farms
may be more successful in procuring inputs and accessing markets, it is important that
leasing arrangements maximize land productivity and also respect the interests of lessors,
who tend to be the elderly or those not capable of farming their land. Again,
governments should monitor and disseminate the leasing arrangements and, where
applicable, the profit sharing mechanisms of these entities, so as to ensure that the land is
well managed and that the lessors receive a fair lease payments.

87. In the last five years, the share of land that is farmed privately has increased and it
will be important to provide small farmers interested in cultivating their land with support
services and microfinance to maximize their productivity. Over time, as land holdings
become more concentrated and agriculture becomes more commercially focused, many
of these support services will be provided by the private sector and producers themselves.
Thus, it will be important not to set up large structures with high fixed costs, but instead
to focus on flexible services that can evolve and eventually be disbanded as the needs of
small-to-medium producers change and their ability to access knowledge and support
from the private sector expands.

²⁴ In the Kyrgyz Republic about 25 percent of arable land is owned by local governments and rented to
producers, along with all pasture and forests (which amount to almost four times the total hectarage of
arable land). In Georgia, a sizeable share of state farm land remains formally unrestructured and pasture
land remains state owned, largely unused (and equal to just under half of all agricultural land). In Moldova,
only about 10 percent of the land remains with state owned cooperatives (kolhoses) and similar bodies.
88. **Agriculture product and input markets.** The analysis underscores the importance of agricultural markets in transmitting growth and supporting rural poverty reduction. To facilitate their development, it is recommended that governments:

- Phase out in-kind payments, which typically undermine incentives to develop a market economy, favor certain specific marketing chains (often government owned, or previously government owned), and raise transaction costs for producers, consumers and the government;

- evaluate the possible gains from input market interventions (e.g., importing agricultural inputs for free or subsidized prices) against their drawbacks—e.g. that subsidized input distribution suppresses the development of private importers and retail chains;

- re-assess their involvement in output processing and marketing parastatals, which are still common for agroprocessed crops and which may not offer competitive prices and services to the small farmers who often grow these crops (e.g., tobacco and cotton in the Kyrgyz Republic);

- develop public goods that support access to markets – roads, telephones, transport services and market information systems;

- evaluate the extent to which fiscal incentives suppress the development of larger scale traders (e.g., raise the minimum business threshold required to pay value added tax); and

- analyze formal and informal labor markets in order to understand key factors constraining the participation of poor rural households in them. This is particularly relevant for Georgia, where the labor market was unable to transmit the growth in the services sector to rural areas.

89. **Social sector policy.** The analysis suggests that with the exception of Moldova, social sector policy favors high expenditure quintiles over low ones. It is important for governments to assess the targeting strategies of their social policies to ensure that they are directed towards the intended and most vulnerable groups. Education is significantly correlated with welfare defined in terms of higher expenditures (and in the Kyrgyz Republic, the relationship between education and expenditures is stronger in rural than in urban areas), but access is lower in rural areas than in urban areas. Anecdotal evidence suggests both that households in rural areas have to pay more for education than their urban counterparts and that the quality of education is worse in rural areas. To better understand issues related to access and quality of education in rural areas, governments may wish to evaluate the spatial distribution of education services and expenditures.

90. **Macro policy.** A necessary condition for growth and poverty reduction is macroeconomic stability, which was largely present in the three countries during the late 1990s, except when pressures were created by exogenous shocks. The maintenance of a
competitive exchange rate is an important component of macro policy, and will also be important for agricultural growth and rural poverty reduction; it should be a key policy objective. Macroeconomic stability is also important for deepening the financial sector and lowering the cost of borrowing, which is important for rural producers. Another key aspect of macroeconomic stability in these countries is to recognize and work within fiscal constraints. In the rural context, it will be important to ensure that expenditures on agriculture and in rural areas are efficient. To this end, governments should carry out detailed public expenditure reviews of agricultural spending and efficiency, as well as other sector spending in rural and urban areas (for example, on social sectors and infrastructure). They should also examine the fiscal responsibilities and revenue sources of local communities, which can often play a key role in infrastructure maintenance and soil conservation.

91. **Data collection and analysis.** Household surveys provide critical information to examine the evolution of poverty and inequality. However, in many countries, they do not include variables which are important for rural poverty, such as: (a) information on land quality, e.g., the amount of land tax paid, irrigation fees, and/or access to water for irrigation; (b) ownership of livestock and vehicle assets, which are an important source of rural welfare; (c) spending on social services (since they are free in many transition countries, this is not generally included in the surveys, but as the practice of informal fee paying has increased, this information should be collected); (d) information on purchases of specific inputs, which would help to ensure a better calculation of net farm income and would a better tracking of input market development; and (e) access to road infrastructure which is an important determinant of market access.
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