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Rural Non-Farm Economy Project

The Rural Non-Farm Economy in Georgia: Overview of Findings

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Abbreviations &Acronyms

CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
GEL	Georgian currency, the Lari, introduced in 1995
DFID	Department for International Development, UK
EBRD	European Bank for Reconstruction and Development
EU	European Union
FAO	UN Food and Agriculture Organisation
FDI	Foreign Direct Investment
FSU	Former Soviet Union
GoG	Government of Georgia
IDP	Internally displaced persons
IGA	Income generating activity
IMF	International Monetary Fund
LDC	Land Distribution Commission
LFA	Less favoured area
MAFI	Ministry of Agriculture and Food Industry, Georgia
MFA	More favoured area
MSME	Micro, small and medium sized enterprises
NGO	Non-governmental organisation
NRI	Natural Resources Institute
NSS	GoG National Statistical Service
PRSP	Poverty Reduction Strategy Paper
RNF	Rural non-farm
RNFE	Rural non-farm economy
SME	Small-medium sized enterprise
USAID	United States Agency for International Development

1 Introduction

The literature on transition economies devotes relatively little attention to agriculture and the rural non-farm economy, despite the importance of the sector and its relevance to the livelihoods of the majority of the world's poor. This report is part of growing volume of valuable empirical work on agriculture in transition countries and especially on the topic of the rural non-farm economy and livelihood diversification among the poor. The empirical work presented in this report is primarily based on a large (nation-wide) rural household survey and other field-related research projects representing a broad range of methodologies borrowed from economics, sociology and social anthropology. The report has been a collaborative endeavour involving significant contributions from the following individuals: Ms Tea Khoperia (IPM Georgia) who organised and implemented the survey in Georgia; Mr Tskitishvili (IPM Georgia), Ms Darejan Kapanadze (World Bank), Mr Giorgi Meskhidze (Centre for Social Studies) and Mr Tamaz Dundua (Elkana). The authors' gratefully acknowledge the support of the DFID/World Bank Collaborative Program for Rural Development. However, the views in this report are solely those of the authors and do not necessarily represent the official view of the agencies or individuals concerned.

1.1 Background to the study

The focus of this paper is on rural non-farm livelihoods in Georgia. It was prepared as part of the Natural Resources Institute project entitled 'Characterisation and Analysis of the Non-Farm Rural Sector in Transition Economies', undertaken for the World Bank and the Department for International Development (DFID). This programme of applied policy research began in March 2000 as a result of the Rural Non-Farm Economy (RNFE) workshop held within the World Bank in Washington in June 1999. This document is intended to summarise the key findings from a national survey of the RNFE in Georgia conducted during Spring 2002.

The intended outputs of this study are (1) to improve understanding of the dynamics of the Rural Non-Farm Economy (RNFE) in providing employment and income diversification opportunities in Georgia, and (2) to promote mechanisms for integrating research results into relevant policy processes. Improved policy-making in this context may involve:

- A focus on improving the well-being and livelihoods of the rural population in Georgia, through developing their capacity to access resources and actively participate in non-farm rural enterprise and employment opportunities;
- An emphasis on the diversity and diversification of income sources in the face of vulnerability to shocks and stresses – particularly on the part of the poorest members of society; and
- An acceptance of the need for an in-depth understanding of the context (socio-cultural, economic, agronomic) in which non-farm rural livelihood options are currently pursued and in which new options can be developed.

The paper contributes to the above NRI project which aims to identify the institutional and policy deficiencies constraining non-farm rural livelihoods in Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS), to analyse the factors determining infrastructural and policy factors and to work with policy-makers to improve non-farm rural economy opportunities.

1.2   Conceptual framework

This paper is structured around the concepts of livelihood and diversity. *'A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access gained to these … that together determine the living gained by … the household'* (Ellis, 2000:10).

Assets form households' endowment of resources with which to gain their living. In this definition, the conventional meaning of assets is expanded to include, besides material and financial resources, also household members' skills and experience (human capital) and their relations within wider communities (social capital). This inclusive definition, as well as use of the term 'capital' in these senses, is not uncontroversial (Davis & Bezemer, 2003), but it serves to highlight several unifying features of diverse resources. They require investment, in terms of time or money, in order to be obtained or formed. They can (but need not) be used in an economically productive way. And in doing so, they are (imperfectly) substitutable and complement household labour.

Activities comprise all the ways in which household members utilise their non-leisure time to support their livelihoods. This broad definition includes work and care, employment and entrepreneurship, agricultural production and trade, and a range of other dichotomies (some of these are depicted in Davis & Bezemer, 2003). Engagement in activities both requires assets and may increase households' stock of assets. Households' endowment of assets and involvement in activities jointly support their level of well-being.

The second central term in this report is *diversity*, which follows naturally from the idea of livelihood. Diversity in a household's activities and income (which is one measure for a household's living standard) *'refers to the existence, at a point in time, of … different household income sources…'* (Ellis, 2000:14). Given heterogeneity in assets, diversity in income is almost implied. Indeed, both individual and household income normally derives from more than one source: income diversification is the norm, specialisation the exception (Barrett *et al,* 2001).

Typically, household income diversity is especially large in rural areas. Rural households are more often producers as well as consumers, which implies the presence of profit (from sold output) or in-kind income (if output is consumed) as income components in addition to, for instance, wages. Several other factors make it less likely that any single source of income is sufficient to meet rural household needs: larger household sizes, relatively lower remuneration of capital and labour, seasonality of agricultural revenues, and the more limited market development that often characterises rural areas

1.3   Aims and rationale of approach

In recent years there has been growing recognition of the role of the non-farm sector for employment and income smoothing and generation in *rural* areas in the developing countries as well as in the European Union (EU), CIS and CEE. However, there has been relatively little focus on the factors that determine people's *capacity* to take advantage of or to generate these opportunities. It is hypothesised that two processes are apparent: *demand-pull*, where rural people respond to new opportunities; and *distress-push*, where the poorest are driven to seek non-farm employment as a survival strategy. Sometimes these processes work together. The non-farm sector is thus vital for rural employment and

incomes in situations of both stagnant and buoyant agricultural sectors and rural economy as a whole. It is also important for Georgia's economic growth, as the development of remunerative and sustainable non-farm employment opportunities will have important effects in terms of poverty reduction and the use of government and donor structural funds in the context of the Poverty Reduction Strategy Paper. This research aims to identify the key socio-economic factors, resources, activities and constraints to rural households and enterprises in the non-farm rural economy. These data will be collected at the micro-level and analysed in the context of farm systems theory and contemporary econometric methodologies. The aim is to derive policy conclusions conducive to the development of sustainable rural livelihoods.

Figure 1 provides a schematic diagram of the survey fieldwork criteria/structure. Certain secondary data and conceptual problems were encountered. Georgia has municipal (unofficially NUTS)[1] and regional data. There is no standardised definition of *rural* in the transition economies. Therefore, we have used a definition of 'rural' based on the following criteria[2]:

- A population density of less than 60 persons per km^2.
- The largest city in the municipality must have a population of less than 30,000.
- Share of agricultural output at least 20% higher than the country average.
- Share of people employed in the agricultural sector at least 20% higher than the country average.

Figure 1: Schematic diagram of the proposed fieldwork criteria/structure
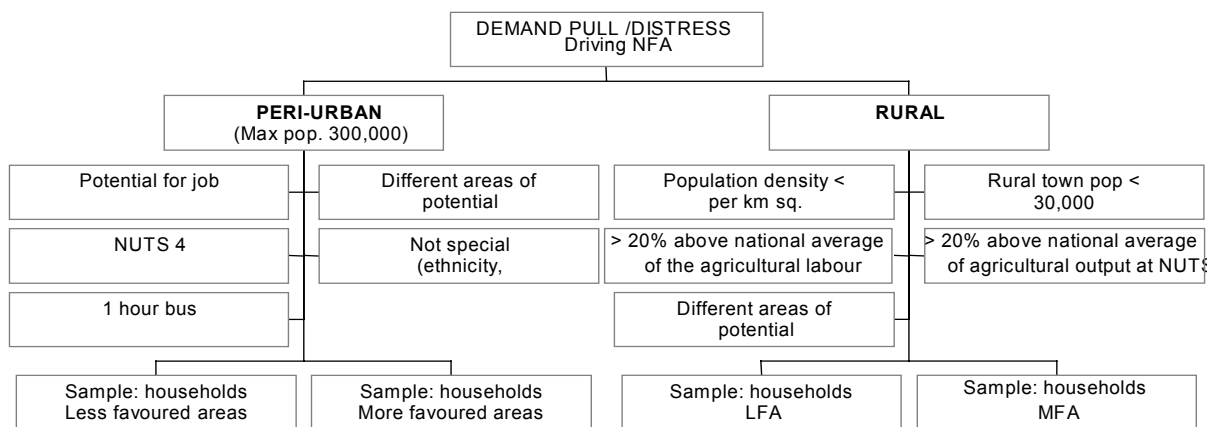
[1] The NUTS nomenclature (Nomenclature of Territorial Units for Statistics) is a five-level hierarchical classification (three regional levels and two local levels) drawn up by Eurostat to provide a single uniform breakdown of territorial units for the production of Community regional statistics, for socio-economic analyses of the regions and for the framing of Community regional policies.

[2] Rural and urban regions are defined by the OECD (1996) as follows: (1) in a mainly rural area more than 50% of the population inhabit rural municipalities; (2) in an area with essentially rural features between 15% and 50% of the population live in rural municipalities and (3) in mainly urban areas fewer than 15% of the population live in rural municipalities. A rural municipality is classified as such if it has a population density of fewer than 150 persons per square kilometre. The idea of 'rural' also includes municipalities with fewer than 5,000 inhabitants (Lanjouw and Lanjouw, 1997).

The survey structure has two tiers. The regional tier is where we disaggregate according to peri-urban and rural regions. Variability at this level is important statistically and the local knowledge of the project team was crucial, as they made the final decisions concerning less favoured areas (LFA) and more favoured area (MFA) designations. For complementarity reasons the project followed the EU definition of less favoured regions as closely as possible. The second tier is comprised of less favoured and more favoured areas, within which 1100 households were selected in Georgia. The survey focused on 4 types of households:

- Full-time farm household
- Part-time with dependent/wage employment
- Part-time with self-employment
- Non-farm household

In order to ensure that there was consistency in the approach and methodology in the different field sites where micro-level data were collected, and to ensure that the micro-level data collection and the modelling work is well-integrated, NRI organized in-country meetings and workshops with relevant research and government agencies.

2 Country background

Georgia has been a democratic republic since the presidential elections and constitutional referendum of October 1995. The Georgian state is highly centralized, except for the autonomous regions of Abkhazia and Ajaria, which have a special autonomous status within Georgia. Those regions were special autonomous regions during Soviet rule and the legacy of that influence remains. On April 9, 1991, the Supreme Council of the Republic of Georgia declared independence from the U.S.S.R. Beset by ethnic and civil strife (resulting in a civil war) since independence in 1991, Georgia began to stabilize in 1995. However, more than 230,000 internally displaced persons (IDPs) present an enormous strain on local government, financial resources and political stability. Peace in the separatist areas of Abkhazia and South Ossetia, overseen by Russian peacekeepers and international organizations, will continue to be fragile, requiring years of economic development and negotiation to overcome local enmities. Considerable progress has been made in negotiations on the Ossetian-Georgian conflict, and negotiations are continuing in the Georgia-Abkhazia conflict. The Georgian Government is committed to economic reform in cooperation with the International Monetary Fund (IMF) and the World Bank, and stakes much of its future on the revival of the ancient Silk Road as the Eurasian corridor, using Georgia's geography as a bridge for the transit of goods between Europe and Asia.

Georgia is a mountainous country extending across almost 70,000 km^2 with a population of 5.5 million (1.9% of the former USSR's total population) in 1991. Around 70% of the population is Georgian, 8% Armenian and about 6% each Russian and Azeri. Georgia's capital Tbilisi comprised 23.5% (1.28 million people) of the country's total population in 1991. Population density in Georgia is 78.4 people per km^2. Officially 56.2% of Georgia's population is classified as urban and 43.8% as rural.

2.1 Georgian macroeconomic and agricultural sector developments

2.1.1 Macroeconomic conditions

Georgia's economic performance was one of the best among the states in the former USSR, especially during the first half of the 1980s, when the growth in its net material product (NMP) averaged between 7-8%. However, its economic performance (like that of other former USSR states) weakened considerably since 1989. According to official estimates, Georgia reported a 21% decline in NMP(between 1988-1992: EIU 1994), while inflation, as measured by the retail price index (RPI), rose from 4.8% in 1990 to 81.1% in 1991. The volume of external trade has halved since, mainly as a result of the dissolution of trade links within the former USSR, and the trade deficit expanded, principally because of increasing energy prices. Georgia's economy has undergone an extremely severe contraction over the past twelve years as links with other former Soviet/rouble zone countries have broken down.

The armed conflict in the north of the country has been particularly harmful to the economy and has left only a small part of the border open for international trade. Georgia's economic recovery has been hampered by the separatist disputes in Abkhazia and South Ossetia, a persistently weak economic infrastructure, resistance to reform on the part of political factions, and the Russian and Asian economic crises of 1998. The government has nonetheless introduced some economic reforms and made progress in reducing inflation, meeting most IMF targets through its July 1998 review, qualifying for

economic structural adjustment facility credit status, introducing a stable national currency (the Lari), introducing free market prices for bread products, preparing for the second stage of accession to the World Trade Organization (the first stage has already been entered), signing agreements that allow for development of a pipeline to transport Caspian oil across Georgia to the Black Sea, and passing laws on commercial banking, land, and tax reform. However, as a result of the fallout from the Russian and Asian economic crises, Georgia has recently been unable to meet IMF conditions for further loans.

The Government of Georgia (GoG) has not effectively managed the impact of these shocks and, it could be argued, has exacerbated rather than mitigated the impact through its economic policy. For example, to compensate for low tax collection rates and to maintain a stable exchange rate, the GoG relied heavily on two policy instruments: the freezing of budget spending and a tight monetary policy. These policies were applied inconsistently and resulted in negative social affects. Arrears in pensions, public sector wages and social benefits rose dramatically, further increasing the hardship of the population.

Table 1 Macroeconomic indicators 1996-2002

	1996	1997	1998	1999	2000	2001	2002
	Percentage change						
Real GDP Growth	10.5	10.8	2.9	3.0	2.0	4.5	3.5
Industrial output	7.7	2.5	-2.7	3.4	3.2	-	-
Agricultural output	5.1	3.9	-6.6	6.9	12.6		
Inflation (end of year)	13.7	7.3	7.2	10.9	4.6	3.4	6.0
	Millions of US$						
Current account	-275	-375	-389	-232	-165	-215	-211
Trade balance	-351	-559	-685	-541	-409	-458	-475
Foreign direct investment	54	236	221	60	152	100	80
GDP per capita	563	657	771	524	562	592	-
General government balance (% of GDP)	-7.3	-6.7	-5.4	-6.7	-4.1	-2.0	-1.7
Share of agriculture in GDP (%)	27.0	35.5	30.9	28.0	-	-	-
Share of industry in GDP (%)	11.4	12.5	11.9	13.0	-	-	-
Unemployment (% of labour force)	2.8	7.7	12.3	12.7	10.3	11.1	-
	Memorandum items						
Government revenue (% of GDP)[a]	13.8	14.4	15.6	15.4	15.3	-	-
o/w tax revenue	10.8	13.0	13.2	14.2	14.3	-	-
Average wage (% of poverty line)[b]	60	106	134	140	141	-	-
Average pension (% of poverty line)	16	16	20	22	22	-	-

Source: EBRD Transition Report (2002), World Bank (2002).

Note: * denotes estimate.

[a] Data includes official grants. World Bank (2002).

[b] Using the World Bank line approx. 55GEL per a single adult per month at the end of 1999. World Bank (2002).

Table 1 shows that real GDP growth has improved since 1996, but from a very low base of official economic activity. While GDP grew during the period, private consumption declined in both 1998 and 2000. Also, average incomes grew less than GDP. The slower growth reflects the effects of terms of trade shocks (i.e. relative price of exports vis-à-vis imports), and relatively low growth in the agricultural sector (the share of rural population in Georgia is 44 percent and it is almost fully dependent on agriculture). In addition to low aggregate income growth, there have been changes in relative prices, which have negatively affected the welfare of the poor. Employment generation has

fallen substantially behind GDP and overall during the period employment levels have changed only marginally (World Bank 2002). As shown in Table 1 registered unemployment remains quite high at 11.1 percent. Growth in Georgia has not been pro-poor because it has been concentrated in a narrow set of industries (e.g. telecommunication, information technologies, financial services and transport, comprising approximately 5% of total employment, World Bank 2002). This did not translate into substantial employment generation. Thus, growth has had a negligible impact on the livelihoods and welfare of the average household and on poverty levels in Georgia.

Tax revenues have risen gradually due to recent tax reform, encouraged by the IMF (for example the abolition of corporate tax exemptions). Still, Georgia's tax revenues, at less than 15 percent of GDP, remains among the lowest in the region (EBRD, 2002 – see Table 1). This diminishes government effectiveness in providing an adequate social safety net or to invest strategically to make the economy less exposed to international economic shocks. Georgia needs to effectively implement its tax legislation. International financial institutions continue to play a critical role in Georgia's budgetary calculations (see Table 1).

There has been some progress on structural reform. All prices and most of trade have been liberalized, legal-framework reform is being developed, and government downsizing is underway. More than 10,500 small enterprises have been privatised, and although the privatisation of medium- and large-sized firms has been slow, more than 1,200 medium- and large-sized companies have been set up as joint stock companies. A law and a decree establishing the legal basis and procedures for state property privatisation should continue to reduce the number of companies controlled by the state.

Due to a lack of investment, Georgia's transportation and communication infrastructure remains in very poor condition. Georgia's energy sector is in a critical condition. Shortages of electricity have resulted in public unrest. In 1998, Georgia began to privatise its energy distribution system and expects to fully privatise its energy generation system by 2003.

To encourage and support the reform process, donors are shifting the focus of their assistance from humanitarian to technical and institution-building programs. Provision of legal and technical advice is complemented by training opportunities for parliamentarians, law enforcement officials, and economic advisors. The donors are increasingly inclined to impose conditions on assistance in order to encourage improved performance on key issues and privatisation of key sectors, including energy. The Georgian government is also well advanced in drawing up a PRSP with the assistance of donors.

2.1.2 The agricultural sector

Agriculture is a key sector in the Georgian economy as it accounts for around 28% of GDP (see Table 1), generates 70% of value added in the non-service economy sectors and employs around 50% of the national population (latest figures for 1999). This is true not only in rural areas, but also in small towns. Around 43 percent (3.2 million ha) of the territory is used for agriculture. However, yields are low, the domestic market is depressed and exports are small. The sector is dependent on irrigation infrastructure in the east and drainage infrastructure in the west. This infrastructure has virtually collapsed

as a result of the civil war, vandalism and deferred maintenance. In addition the severe droughts of 1998 and 2002 demonstrated the fragility of rural households' coping strategies in the face of these shocks.

The Georgian climate is well suited to the production of relatively high valued fruit crops, viticulture and tea (see Table 2). Over 500 varieties of native grapes are still grown in Georgia, which produced most of the quality wines in the Former Soviet Union (FSU). Georgia was the largest tea producer in the FSU, but a lack of investment means that the quality of tea produced is rather poor. Georgia used to export substantial quantities of fruits, tea and wines to other states of the FSU. As in other Transcaucasian countries, much of the fruit produced in Georgia is exported to other regions of the FSU through private distribution channels and thus is unrecorded in official inter-republican trade figures, which therefore underestimate the extent of Georgian exports.

Over the period 1987-1991 the area sown to grains in Georgia averaged 264,000 ha. Much of the grain produced was only suitable for feed and thus Georgia annually needs to import around 2 million tonnes of grain, mainly from outside the FSU region, both for human consumption and animal feed. The relatively low level of cereals output has not always been sufficient to satisfy domestic demand. This is a consequence of Soviet central planning, which decreed that farms in the west of Georgia, traditionally the country's bread basket, should specialise in citrus fruits and tea and that Georgia should import its grain from Ukraine and Kazakhstan. Since 1992, Georgia has been receiving substantial amounts of wheat as food aid.

Livestock numbers in 1989 were estimated at approximately 1.54 million cattle, 1.89 million sheep and goats and 1.1 million pigs. Since then livestock numbers have declined sharply (see Table 3). Faced by uncertain demand for livestock products and increasing input costs, in particular the increasing price of feed, livestock producers have cut back production, reduced feed use and slaughtered livestock.

Most livestock product imports into Georgia came from Ukraine, Belarus, Latvia and to a lesser extent Russia. However, with the collapse of inter-republican trade relations in 1991, inflows of these products declined substantially causing serious shortages on the domestic market.[3] During 1992-1993, as the country became more enmeshed in inter-ethnic conflict and internal political unrest, trade with other FSU states fell still further resulting in greater disruptions to domestic food supplies. Food aid transfers have filled some of the gap in domestic supplies. The result was an increase in the share of the rural population dependent upon subsistence agriculture. What is clear from Table 3 is the continued importance and primacy of the smallholder peasant farm (peasant household) to the overall livestock production of Georgia.

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[3] The fall in inter-republic supplies of sugar has produced large shortages in Georgia. This has reduced consumption and disrupted private plot production, which relies heavily on sugar as the main preservative for fruits. As in other states of the FSU, private plot production provides an important additional source of food to the bulk of the population throughout the winter months (World Bank, 1995).

Table 2 Production of main agricultural commodities in Georgia 1987-1999 ('000 tons)

	1987-1991 average	1998	1999			
	thou tons	thou tons	1000 ha	kg/ha	thou tons	% change 98/99
Cereals, *of which*	603	597.8	378.8	2,040.0	780.5	30.5
Wheat	195	144.6	111.2	-	-	-
Barley	-	20.2	28.3	-	-	-
Maize	284	420.2	223.4	2,230.0	-	-
Pulses	8	9.2	10.2	-	-	-
Sunflower	-	22.8	71.4	620.0	40.5	77.6
Soybeans	-	1.1	-	-		
Tobacco	-	3.4	1.8	1,190.0	2.1	-38
Potatoes	308	349.8	34.1	1,300.0	443.3	26
Vegetables	516	380.0	51.6	9,600.0	525.2	38
Melons	-	32.2	-	-	-	-
Roots	-	0.9	-	-	-	-
Annual grass	-	45.2	21.0	-	-	-
Perennial grass	-	63.1	33.0	-	-	-
Maize for forage	-	12.6	0.1	-	-	-
Fruits	-	279.0	-	5,200.0	296.0	6
Grapes	379	238.5	-	3,500.0	220.0	-8
Citrus	-	85.1	-	3,700.0	56.0	-36
Tea	475	47.2	-	2,500.0	60.0	27

Source: CIS Goskomstat. IMF, Economic Review: Georgia, 1993. Didebulidze, 2000.

Table 3 Livestock inventory in Georgia, 1989-1999 (thousand head on January 1st)

	1989		1998		1999	
	total	of which by households	total	of which by households	total	of which by households
Cattle	1548	938	1051	1035.6	1122.1	1111.2
Pigs	1099	607.3	365.9	362.9	411.1	409.6
Sheep and goats	1894	881.1	586.7	542.2	633.4	595
Horses	22.5	17	-	-	34.1	33.6
Poultry	25172	9560	12409	12309.1	6027	5943.1
Bees (thou. families)	112	53.7	78.3	74.3	94.2	90.4

Source: CIS Goskomstat. IMF, Economic Review: Georgia, 1993. Didebulidze, 2,000.

In the 1990s, new forms of property ownership developed in Georgian agriculture, replacing the state-owned farm structure from the central planning era. However, as in many other former centrally planned economies, people who were empowered during the previous system tried to preserve their network and to benefit from privatisation. For example, former collective farm officials have in many cases retained much of their pre-reform influence because of control over "privatised" assets, family ties and links with local political power networks.

Another way in which the local bureaucracy can pursue their self-interest is related to the tax system. As previously noted, tax collection rates in Georgia are extremely low (around 14 percent). Despite the deep financial crisis within Georgian agriculture, and its largely subsistence structure, since January 1999 farmers have been subject to a long list of taxes (see Table 4).

Table 4 Taxation on agricultural production & farming activities

	Tax/ levy	Rate	Notes
1	VAT	16.7%	Of turnover, minus VAT paid for services and inputs[4]
2	Corporation Tax	20%	Of profits from sales of farm produce (for legal entities)[5]
3	Income Tax	20%	Of profits from sales of farm produce (for physical entities)
4	Property Tax	1%	Of the cost of fixed assets
5	Social Insurance	27%	Of gross wages of employed labour (for legal entities)
6	Medical Insurance	3%	Of gross wages of employed labour (for legal entities)
7	Unemployment Fund Fee	1%	Of gross revenue
8	Traffic Fund Fee	1%	Of gross revenue
9	Land Rent/Land Ownership Fee	-	Varies due to land quality, though is on average US$24 per ha.
10	Entrepreneurship Tax	1%	Of revenues minus cost of inputs
11	Dividend Tax	10%	Of net profit (for legal entities only)

All farmers have to pay the land tax, which is levied according to farm size measured by the land area in hectares and the land category. The latter is based on State pre-1990 evaluations of soil quality, degree of fertility, natural resources and farm location. Davis *et. al* (2001) conducted a study of small-farm rural livelihoods and household expenditures based on a database of 200 organic farms in Georgia[6]. For the farmers interviewed in their study, this tax varies between 2 to 40[7] Georgian Lari (GEL) per hectare. For category I land (prime black earth arable land) farmers could expect to pay 40 GEL per ha, whilst pasture might cost as little as 2 GEL per ha.

If the farmer has an officially registered firm, a tax inspector will visit and require the payment of value added tax and other taxes listed in Table 3 once a year. Other farmers pay taxes at the point of sale for their produce (usually at regional markets). Most farmers do not officially register their farms as that incurs a higher level of taxation and thus the paying of more bribes to local tax collection officials. Most of the farmers have only their small household plots and pay tax on this. Farmers leasing land are usually paid in-kind by a portion of output. A person renting property/land from the government has to pay land, water and electricity taxes (excluding VAT). If the farmer is processing food or running an on-farm enterprise (which is registered, he/she is liable to additional taxes. In total these taxes and fees comprise between 35-50 per cent of organic farm sales revenue. On conventional (non-organic) farms taxes can comprise 40-60 per cent of the profit (defined as the difference between the costs of production and total turnover). For most farmers, the payment of all due taxes would make their farm enterprise financially unviable (Davis *et. al.*, 2001).

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[4] The VAT for services and inputs is deducted from the total VAT amount only if the official receipt confirms payment of VAT by the supplier. Also, recently a sales (amount) threshold of GEL 35,000 has been adopted for VAT payers in agriculture. This may have the potentially negative impact of promoting the subdivision of medium and large farms to small-scale units in order to avoid VAT.

[5] A legal person is an organised entity, created for accomplishment of a certain object and having its own property under ownership, that is independently liable with its own property and acquires rights and duties in its own name, makes transactions and can sue or be sued.

[6] The main aim of the study was to elaborate a plan for the development of farms and their transition to organic farming methods. The socio-economic components of the study questionnaire provide a description of farm incomes and expenditures, and aims to provide an indication of the next seasons planning for farm development. The study also included 10 participatory rural appraisal case studies of a cross-section of farm households.

[7] At current exchange rates, 1 Lari is c. US$0.50.

The panoply of taxes, their complexity and the financial burden encourages tax evasion by rural dwellers and thus the perpetuation of bribes to local officials. Anecdotal evidence amongst the farmers interviewed by Davis *et. al.,* (2001) suggests that both taxes and bribes must be paid at all stages of agricultural production from the farm gate to the market, which places an increased burden on producers. From the political economy perspective, this suggests that local administration continues to use its power for extracting private benefits. Therefore, they are not interested in furthering reforms in rural areas, which could bring about changes in civil society and local institutions.

2.1.3   Land reform

Land reform in Georgia was launched during a period of political crisis and civil war in the Abkhazia and South Ossetia regions of the country. A split amongst the leaders of the ruling coalition "Round Table Free Georgia" in late 1991 led to the outbreak of civil war and the popularly elected President Gamsakhurdia was ousted. Gamsakhurdia was a hard-line opponent of land reform, whilst, at the same time, the demand of the population for land was very high. Despite this, he commanded a great deal of popular support. After the removal of the president, the newly formed Cabinet of Ministers introduced land reform legislation just two weeks after coming to power. The rapid introduction of land reform without any prior preparation may be explained by the new government's need to legitimise itself and gain popular support, especially in the rural areas where the civil war still raged.

Institutionally land reform started with Government Resolution 48 of January 1992, widely referred to as the 'land privatisation decree'. The substance, however, was not land privatisation but land distribution, as the land remained state-owned and was given to individuals in inheritable lifetime use. For the implementation of land reform a special State Committee of Land Resources and Land Reform was established. It was later incorporated into the Ministry of Agriculture and Food Industry (MAFI). At the village level, Land Distribution Commissions (LDCs) were founded as elected bodies, charged with the main task of redistributing land. In most cases the LDC Chairman was either the Director of the former *kolkhoz* or *sovkhoz*, or chairman of the village council (Sakrebulo) (EU-TACIS, 1995). The 'land privatisation decree' stipulated that "land shall be transferred by a local government body of a village" (Resolution, No 48, para 11). The legislation does not stipulate how the implementation should proceed, making it difficult for the state to monitor the process, thereby giving discretion to local authorities during the implementation process.

It could be argued that land reform was designed to be incomplete. The 'land privatisation decree' set up two land funds: the fund of state lands and the fund for land reform (Resolution 48/1992). The latter amounted to 850 thousand ha and had to be distributed for individual use in actual physical plots. In fact, by the time the resolution was passed, 200 thousand ha had been used individually under household plots, so the maximum possible increase in agricultural land area under individual use was 650 thousand ha. The land area targeted for distribution was mainly under arable crops and perennials. If all targeted land were distributed, it would have accounted for 70 per cent of arable land and perennials (World Bank, 1995). Specialised farms, areas under

'strategic crops', highly mechanised areas[8], research and experimental farms, seed producing farms and livestock complexes were left in the 'state fund'. The official reason for the large size of excluded land areas was food security. The majority of politicians and the Academy of Sciences equated food security with the state production of food. Behind this were the interests of the former nomenclatura to have time to transform their political influence into economic power. Former elites followed what Swinnen (1997) terms a 'hold-to-power strategy' aimed at staying in charge of the economy by obtaining control over the former state-owned assets.

Land was distributed on a per household, rather than per capita basis. Various provisions, e.g. that a single child household will not acquire a second plot if the child becomes an adult, brought about considerable confusion during the implementation. Three groups of beneficiaries were defined, each group eligible for a different quantity of land: category I including people living in rural areas and engaged in agriculture, category II comprising people living in rural areas but working outside agriculture, and category III for the urban population.[9] Category III has been the most fluid, so it was there that the local officials responsible for land distribution could exercise their discretionary power. This group has been defined as incorporating urban citizens who own a house or a part of it in rural areas and 'those citizens of urban areas who are willing to obtain a personal plot of land' (Resolution 128/6th February 1992). In general, approximately 1 million households or 60 per cent of the population benefited from the land reform (Didebulidze, 1997).

Several other aspects of the land reform support the view that it was designed to be incomplete. 'Land privatisation' had a narrow focus on household plots only. It was neither an element of a comprehensive agricultural reform programme nor included ways of restructuring the large farms inherited from the Soviet system (Lerman, 1996). The 'land privatisation decree' was followed in September by a Government resolution on reorganisation of state and collective farms. However, this resolution provided very little guidance for actual reorganisation (Phutkatadze, Bziava 1999). Nominally the kolkhozes and sovkhozes continued operating. Until 1996-1997 they incorporated 78 per cent of all agricultural land (58 per cent if pastures are excluded) (Lerman, 1998). However, in practice they disintegrated and ceased to produce.

For four years there was no legal basis for land registration and for transfer of property rights in land from the state to the reform beneficiaries. Only in 1996 was the distributed land denationalised by the *Law on the Ownership of Agriculturally Designated Land* (February, 1996). However, in order to become privately owned, land has to be registered and registry certificates have to be issued. In order to keep their power and influence, the bureaucrats slowed down the process. Thus, the Ministry of Agriculture and Food Industry (MAFI) attempted to block and subvert the US Agency for International Development (USAID) Land Registration programme, as this programme would speed up the transfer of control over land from bureaucrats to beneficiaries. USAID insisted that Registration Certificates should be issued for a nominal one GEL fee. The Ministry demanded a 1000 GEL fee. In a country where the average monthly salary is 47 GEL

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[8] In a further decree No 290/10th March 1992 the Cabinet of Ministers opened a door to include areas under mechanised cultivation in the reform fund, but it was stressed that this should only happen 'under the case of necessity' without any further detail (Decree 290/10th March 1992).

[9] The land area was also differentiated according to the location, plains or mountains. For example households in group I have been eligible up to 0.75 ha in the plains and 3 ha in the mountains.

(Didebulidze, 1997), charging a 1000 GEL fee is prohibitive. Somewhat belatedly, in April 1999 the Parliament passed a law *"On Land Parcels State Registration Fees"* which aims to complete the process of land reform by 2003, 11 years after the first 'radical' step. Popular pressure for the transfer of property rights and registration of land plots was not high. The beneficiaries had insufficient information to allow them to estimate how restricted their rights in land were or to appreciate the need for registration.

Despite this breakthrough in the institutional framework of reform, land reform continues to be incomplete. Table 5 shows that overall only 26.4 per cent of agricultural land was privatised by 1998, whilst 48.3 per cent was not distributed. The latter included 12 per cent of arable land and 22 per cent of land under perennials (Phutkaradze, Bziava, 1999).

Table 5 Status of land reform in Georgia (1998)

Land category	April 1998	% of total
- Privatized	789,700	26.4
- Leased	756,900	25.3
- Not distributed	1,444,500	48.3

Source: State Department for Land Management, 1998.

In summary, land reform in Georgia has generally been perceived as radical because it provided for the allocation of land in physical plots and included large number of urban as well as rural beneficiaries. However, our analysis of the Georgian institutional and legislative framework governing land reform suggests that it was designed as a minimal legitimacy strategy. The land reform process was incomplete and gave discretion to the local elite and the managers of the state and collective farms to influence the implementation. In addition, the initial land reform legislation did not provide legal procedures for the introduction of full and enforceable private property rights on land.

With the economic recession and civil war at the beginning of transition, a largely unprepared and ill-equipped farming sector had to assume the role of the country's chief guarantor of food security. Most farm families lacked basic knowledge of running an independent farm enterprise, and were unfamiliar with some of the techniques of cultivating basic food crops. As a result, food production by 1994 was 60% of its mid-1980s levels. This exacerbated stress on farm family livelihoods[10] and incomes at a time when there has also been a sharp contraction in financial and input service provision. As most Georgian rural dwellers depend on farm production for their existence, these constraints comprise some of the main causes of household livelihood insecurity in Georgia.

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[10] Livelihood comprises the capabilities, assets and activities, which are required as a means of living and refers basically to the provision of assets in terms of natural, financial, social, human and physical capital.

2.2   Main problems and deficiencies in the Georgian agricultural sector

An overview of the main challenges to agricultural development in Georgia, based on the detailed survey of issues above, would include the following elements.

There is a great deal of *uncertainty* within the Georgian agricultural sector. This is primarily the result of the uncertain political and economic situation in the north and south of the country. A resumption of the ethnic war in either Abkhazia or South Ossetia would add to the country's economic and thus agricultural problems. The current political situation will continue to inhibit new investment and the adoption of more efficient technologies within the agricultural sector.

The government needs to speed up the *privatisation of land* (particularly state land). An effective implementation of this policy would ease some of the uncertainty producers' face concerning property rights and also help put state real estate assets into the hands of the more dynamic, emergent farmers. The reform of the existing state taxation legislation, land registration and procurement agencies would also encourage some optimism within the sector. It would do so both by supporting private farming and by facilitating the development of modern wholesale and retail trading networks for both niche market organic farm produce (see Davis et al, 2001) and staple export crops (fruit, tea etc).

Private family farms are growing in significance, particularly in the livestock production sector (mainly in the mountainous areas). This process needs to be encouraged and developed. The fall in output of key agricultural products is in part due to a reduction in the purchasing power of farmers. Certainly, the current levels of interest (between 18-24% per annum despite relatively low levels of inflation: avg. 4% p.a.), is adversely affecting food production, domestic demand and farmers' incomes. However the government have made little progress in this area of economic policy.

The food industry and farmers need access to a reasonable *supply of inputs* (fertilisers, machinery, spare-parts, new technology) and investment in the development of processed fruit, nuts, and wine production. These are areas in which Georgia has good export potential.

The debt situation in the agricultural sector is also an important factor. There was no available data to quantify this at the time of writing. However, policies to manage the existing debt burden, while providing proper incentives to farmers, their suppliers and their customers are still to be developed. This requires greater government action to harden soft budget constraints and to curtail the extension of inter-enterprise arrears.

Increasingly in Georgia the food problem is developing into one of poverty rather than of a supply constraint. Price liberalisation has reduced real living standards and reduced the effective demand of the population. It appears that a large section of the population is increasingly unable to purchase even a minimum basket of food given that the system of welfare payments is inadequate.

3   The Survey

This study is based on a stratified sample of 1,000 households selected across rural Georgia (see Figure 2). The survey was conducted during March to April 2002 in six rayons (regions): Kakheti (East); Qvemo Qartli (East); Samegrelo (West); Guria (West); Imereti (West); and Samtskhe-Javakheti (South). There were three stratification criteria: (i) location of the commune to the closest city (thus a categorisation of peri-urban or rural),[11] (ii) regional characteristics (six rayons), community development (poor-rich), depth of poverty (this data was collected by IPM, Georgia); and (iii) whether the area was of low or high economic, natural resource and agricultural potential, i.e. a less favoured area (LFA) or more favoured area (MFA). The survey data was collated and analysed using SPSS and STATA software.

Four types of households were considered:

- Type 1: all members occupied full time in agriculture;
- Type 2: members occupied in agriculture part-time and part-time dependent activities,
- Type 3: members occupied in agriculture part-time and part-time in self-employment activities; and
- Type 4: members who abandoned agriculture for non-farm activities.

Interviewer training was carried out in two stages. At stage 1 the Project Coordinator explained survey objectives and gave a question-by-question training to regional group leaders. At the next stage group leaders conducted mock interviews in pairs, acting both as interviewers and respondents. Completed interviews were reviewed in the group and attention was paid to common mistakes. Group leaders were also given instructions on the sampling. Their respective group leaders delivered similar training sessions to regional interviewers. The fieldwork was also controlled/supervised in 2 stages: (i) 8 percent of the interviews were conducted in the presence of group leaders/supervisors; and (ii) 12 percent of interviews were verified by back-checking the sites. A special one-page questionnaire was used for back-checking, asking principal questions from the questionnaire. The data obtained was entered and processed in SPSS for Windows, version 10.0.

In each survey region a target population was identified. In particular, villages and peri-urban areas with a population equal to or less than 30,000 people were set apart from the regional census lists. Within each survey region MFA and LFA territories were identified. The criteria for MFA and LFA selection were: a) size of agricultural land per household; b) the ratio of irrigated land; c) population density; d) the quality of land; and e) altitude. Pilot survey consultations with local community leaders and pilot survey respondents also provided rayon information on the quality of local infrastructure, land quality, institutions and climatic variability.

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[11] Peri-urban communes were defined according to the distance to the closest city (<10 km for 30K inhabitants; cities, 10-20 km for > 30-200K inhabitants; and 20-30 km for >200K inhabitants).

Figure 2 Map of location of surveyed regions
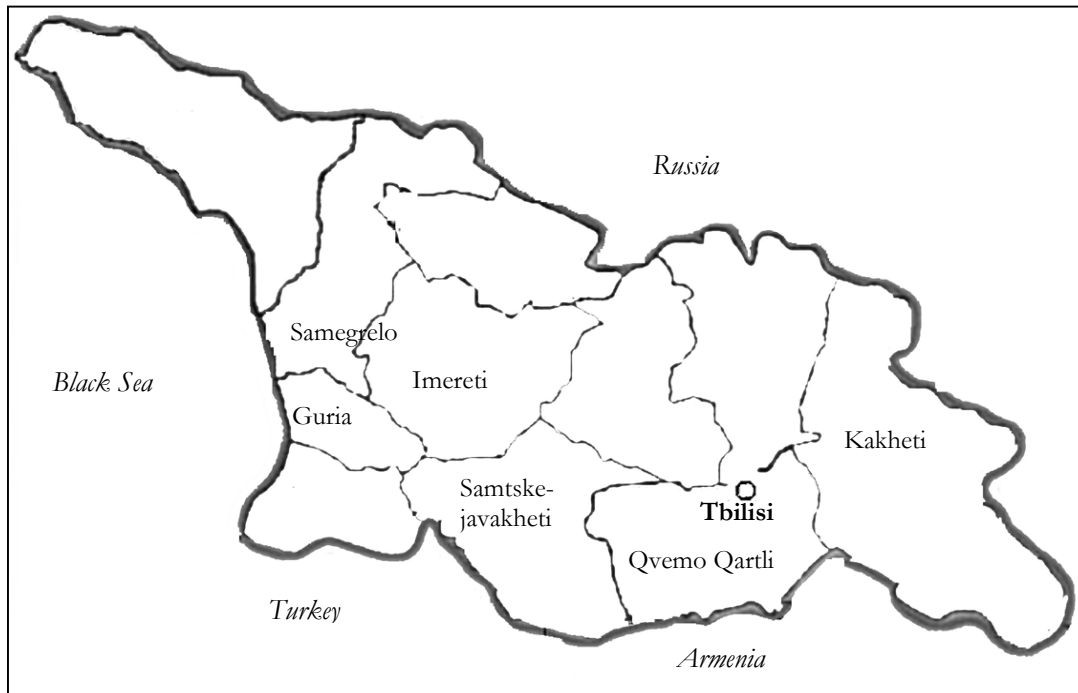
The number of interviews to be administered per region was determined in proportion to the number of target households within the region. It should be noted that in our pilot study based on three rayons in Georgia (Davis and Meskhidze, 2001), it was clear that identifying full-time and part time non-farm households would be extremely difficult for the following reasons: respondents were typically reluctant to present describe themselves as being a full-time non-farm household to avoid taxation and potential corruption; small number of full-time non-farm households; and low rural population density. This meant that there were very few identifiable full-time non-farm households and micro-enterprises. In addition, the pilot survey demonstrated that there are almost no legally registered non-farm enterprises in rural areas. Only where a village is close to a main/arterial road, or if there was a former soviet factory or industry located on its territory is it possible to identify a firm created on a fully legal basis. The main legal status in rural areas is that of an "individual entrepreneur", because in this case a lower registration fee is levied. Therefore, it was important to conduct this survey in district centres too. Thus, the stratified sample and defined quotas/distribution reflect the results of our initial pilot survey, and a consensus regarding approach from in-country meetings with IPM-Georgia and USAID survey design consultants and practitioners in Georgia.

Sampling units were determined from census area lists at random. Starting points were determined within each sampling unit, and households to be interviewed were selected by a "random walk" procedure. Within the sampled household, the head of the household, or the most informed person was interviewed. The final sample distribution by regions is shown in Table 6. Table 7 and Table 8 show the distribution of the surveyed households by: (i) development level, (ii) peri-urban and rural settlements; and (iii) type of household according to employment/activity.

Table 6. Georgian sample distribution by regions

Region	Number of interviews
Kakheti	240
Qvemo Qartli	180
Samckhe-Javakheti	100
Guria	80
Samegrelo	140
Imereti	260

Table 7 Sample sizes by region, development level, and rurality (counts)

Region	Development level[a]		Enthnicity	'Rurality'[a]		Total
	Low	High	Non-Georgian[b]	(peri-)urban	rural	
Guria	60	20	1	0	80	80
Imereti	179	81	0	97	163	260
Samegrelo	106	34	2	34	106	140
Qvemo Qvartli	150	30	133	15	165	180
Samtskh-e-Javakheti	62	38	57	24	76	100
Kakheti	210	30	16	45	195	240
Total	767	233	209	215	785	1,000

Notes:
a. The 6 regions reported here consist of 61 sub-regions (rayons). These rayons were classified as 'high' or 'low' developed and as 'rural' or 'peri-urban', based on income levels and the importance of agriculture in total household incomes . Regional data represents aggregations over rayons.
b. Ethnicity is based on the reported main language spoken in the household. Non-Georgians are mainly Azeri's (106 households) and Armenians (80 households). Other ethnicities in the sample include Russian, Turkisk and Greek people (14, 7 and 2 households).
Source: survey findings

Table 8 Rurality, Ethnicity and household types by regional development level (counts)

Development level	Regional type		Ethnicity		Household types				
	(peri-)urban	rural	Georgian	Non-Georgian	1	2	3	4	5
Low	645	122	586	181	382	245	91	40	9
High	140	93	205	28	121	72	27	10	3
All	785	215	791	209	503	317	118	50	12

Note: Household of 4 types were sampled:
1: household is involved only in agricultural production.
2: household is involved in agricultural production and wage employment.
3: household is involved in agricultural production and independent non-farm enterprise.
4: household is not involved in agricultural production
5: other households.
Source: survey findings

4 Overview of findings

In this section the survey findings will be presented following the Sustainable Livelihoods approach of structuring livelihoods into capitals (or assets), activities, and outcomes in terms of household incomes. Table 9 presents the human, physical and financial capital of households in the survey, for different levels of regional development and rurality, and by incidence of poverty.

Table 9 'Capitals' by regional types, regional development & poverty incidence

'Capitals'	By 'Rurality' (mean)		By development level (mean)		By poverty incidence[e] (mean)		Total sample (mean, S.D.)	
	peri-urban	rural	low	high	non-poor	Poor		
Human capital								
Hh size (persons)[a]	3.8	3.9	4.0	3.6	3.8	4.0	3.9	*(1.8)*
Dependency ratio[b]	0.32	0.37	0.35	0.40	0.36	0.34	0.36	*(0.31)*
male/female ratio	1.06	0.99	1.07	0.98	1.05	1.02	1.0	*(0.8)*
Average age (yrs)	39.3	41.7	40.5	43.7	41.7	39.7	41.2	*(15.9)*
Max. education level[c]	5.9	4.8	5.0	5.0	5.1	4.7	5.0	*(1.9*
% women-headed hh[d]	14	11.5	10.3	17.6	12.1	12.3	12.1	*(32)*
Physical capital								
Access to land (%)	40	82	72	77	74	65	73	*(44)*
Land cultivated (ha)	0.3	0.8	0.7	0.8	0.7	0.7	0.7	*(1.7)*
Cattle (head)	0.3	1.4	1.0	1.6	1.3	0.7	1.2	*(1.9)*
Pigs (head)	0.2	0.6	0.4	0.9	0.6	0.1	0.5	*(1.7)*
Sheep, goats (head)	0.0	1.1	0.9	0.6	0.8	0.6	0.8	*(6.7)*
Poultry (head)	1.3	2.5	1.9	3.7	2.5	1.1	2.3	*(4.2)*
productive assets (Euro)	176	155	118	298	169	128	160	*(1031)*
Financial capital								
Loan uptake (%)	20	17	17	20	16	25	18	*(38)*
Average loan (Euro)	90	73	75	85	74	93	77	*(336)*

Notes:

a. Hh stands for household.

b. The dependency ratio is defined as (1 - (number of household members aged over 15 and under 66) /household size).

c. The education level is defined on a 9-point scale:

No studies and cannot read or write…………………...	0
No studies but can read or write…………………….	1
Elementary school……………………………………	2
Vocational school…………………………………..	3
Secondary school, gymnasium………...……………	4
College………………………………………………	5
Graduate studies (university B.S.)…………………...	6
M.Sc. studies (university)…………………………..	7
Ph.D. studies (university)…………………………..	8
Other occupation-specific higher education………...	9

d. Female-headed households are defined as households without male members aged over 18.

e. Poverty is defined relatively, with those households in poverty, which are in the lowest population quintile.

Source: Survey findings

Rural households are shown to be larger and older than peri-urban households. They also have more dependents and lower education levels. Particularly striking is the large proportion of households without adult men in rural Georgia. This may be related to migration labour, which is quite common in Georgia (see below) and mostly involves the separation of able-bodied men from their families (World Bank, 2002). Since migration is typically higher from urban areas, it is not surprising that the percentage of women-headed households in peri-urban areas is substantially higher than in rural areas. Migration is also something that the better-off households are more involved in (see below; also World Bank, 2000). Hence also the larger percentage of women-headed households in better developed areas. Households in better developed areas, which have higher incomes, are also smaller and younger, with less dependents. Education levels do not differ greatly over regional development levels.

Endowments of physical and financial capitals are generally higher in more rural and better developed areas. This applies to land, livestock, and credit – the only exception is that money values of physical capital stocks (which in our sample is mostly agricultural productive capital) is higher in peri-urban than rural areas. Poor households are somewhat larger, younger, with less dependents, slightly lower education levels and more women-headed households, but all of these differences are small. We also note that access to land is farm from universal, and that many poor and peri-urban households in particular do not have or use land.

These findings should however be interpreted with caution since some standard deviations are large. This note of caution also more generally applies to all differences in means over groups in Table 9 above and Table 10 below. In order to preserve legibility, no results of t-tests for statistical significance of differences are included, and the figures should be taken as indicative and a basis for this initial exploration rather than for definite conclusions. An advanced statistical analysis follows below.

Table 10 displays indicators for households' involvement in economic activities, again categorized by different levels of regional development and rurality and by incidence of poverty. The most striking finding is that agriculture is relatively unimportant: on average only 35 % of household income comes from food production, including in-kind income. The percentage of households deriving income from agriculture is also low, considering this rural sample. The figure of 70% does approximately match the percentage of households with access to land. This limited importance of agriculture in the rural economy is a result of Georgia's recent past as an industrialised, relatively well-developed economy compared to many of the other Soviet republics in the Caucasus and Central Asia.

Table 10 Economic Activity Indicators By Region, Development Level, And Poverty Incidence

	Rurality (means)		Regional development (means)		income poverty (means)		Total sample (mean, S.D.)	
	Peri-urban	Rural	Low	high	non-poor	poor		
N								
Involvement in …(%)								
Agriculture	34	78	67	74	71	56	69	
Other farm-based	1	4	2	8	4	2	4	
Non-farm enterprise	18	16	17	15	17	16	17	
Wage employment	58	41	44	47	52	15	44	
Migration labour	31	19	18	33	22	18	22	
financial assets	16	6	5	18	10	1	8	
Social transfers	48	29	30	43	38	13	33	
Labour allocation (hours per year per household)								
Agriculture	694	2,419	1,982	2,268	2,058	1,963	2,048	*(2,393)*
Non-farm enterprise	393	347	359	351	420	14	1,267	*(1,987)*
Wage employment	1,740	1,137	1,240	1,355	1,377	764	357	*(985)*
Migration labour	488	350	302	634	403	142	379	*(1,085*
All active hh labour	3,315	4,253	3,882	4,608	4,258	2,883	4,051	*(3, 414)*
Share of household income from different sources (%)[a]								
Agriculture	4	43	36	29	31	68	35	*(40)*
Other farm-based	0	0	0	1	0	0	0	*(3)*
Non-farm enterprise	12	9	10	9	11	0	10	*(25)*
Wage employment	44	24	29	26	31	4	28	*(37)*
Migration labour[b]	16	10	10	16	12	7	12	*(27)*
financial assets	6	3	2	8	4	1	4	*(14)*
Social transfers	17	10	12	11	11	20	12	*(25)*
# Income sources	2.1	2.0	1.9	2.6	2.3	0.9	2.0	*(1.2)*
Diversity index[c]	0.27	0.25	0.23	0.31	0.27	0.03	0.25	*(0.23)*

Notes:

a. Agricultural income is calculated on the basis of reported revenues and costs (including depreciation) associated with crop and livestock products. Agricultural income includes both marketed and non-marketed produce, and can take negative values. This was the case for 21 % of households in the sample. Such households are more often poor: of 173 poor households, only 55 had non-negative agricultural incomes. The poor/non-poor comparison is therefore biased towards larger income shares from agriculture, since the negative values were excluded.. There is no such bias in regional comparisons.

b. Income from migration includes remittances in money, food, and other goods sent by household members resident in other parts of the country or abroad.

c. Diversity of income is measured as $1 - \Sigma(\text{income share j})^2$, with j=1,2,…,i. With one source of income, the index equals zero, approaching 1 as i increases. It is based on non-negative income shares.
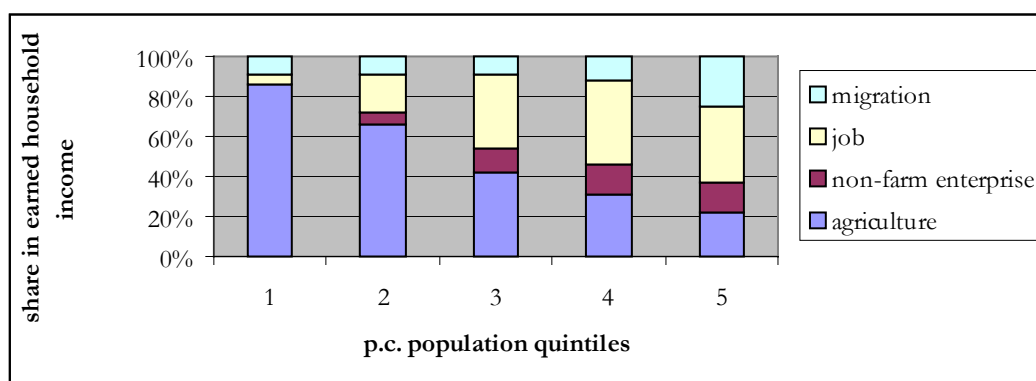
Source: Survey findings

Regionally, the RNFE is more frequently accessed and accounts for a larger share of household income in peri-urban compared to rural areas – most clearly so in the case of wage employment. Peri-urban households on average have clearly less active family labour than rural households, despite similar household sizes and dependency ratios between the two regional types. This may suggest that agriculture absorbs hidden unemployment, as it does in many transition countries. Households in better-developed areas are more often involved in, and allocate more labour towards, each of the recorded economic activities except non-farm enterprise. The difference between regions in labour allocation is largest for migration labour. Income shares of households in better-developed areas, compared to those of households in other areas, are higher for migration and financial assets and lower for other activities. Income diversity and the average number of income sources are higher in better developed regions, but very similar over rural and peri-urban areas.

Poor households are less often involved in agriculture, in line with their more restricted access to land. However, they rely more on agriculture in the sense that a larger share of their income is on average derived from it. The same is true for social transfers: poor households less often access this source of income, but on average are more dependent on it. This is because poor households have no, or very limited access to non-farm economic activities: the percentages of poor households involved in non-farm enterprise, migration labour and, particularly, wage employment are substantially lower (or zero) than is the case for non-poor households. Income diversity in general, as reflected in the number of income sources and the diversity index, is clearly larger for non-poor households.

Figure 3 shows this income distributional aspect of the RNFE in Georgia in more detail. We study here the share of income from economic activities in earned income, thus excluding unearned income sources such as social transfers and assets income. Access to the RNFE, so measured, is greater for the better-off households. There appears to be a consistent, linear relationship between income shares from non-agricultural activities and household income levels. This suggests that access to the RNFE is strongly (and perhaps causally) related to economic well-being.

**Figure 3. Earned Income Non-Farm Shares in Rural Georgia**

Note: earned income excludes assets income and social payments. Non-agricultural farm-based activities were negligible and not included in the Figure.
Source: Survey findings

Figure 4 provides an illustration of some of the activities found within the RNFE, as reported for non-farm enterprises and wage employment (no such information was reported for migration labour). Trade is the most important activity in non-farm

enterprises, followed by the professions, many of which are in services (e.g. tourism, communications, restaurants, health care, sales, tailoring, security services, car repairs). The state sector plays a large role in rural employment, by employing teachers, administrators, and other public service workers. The large importance of industry, also largely dependent on the state, testifies to Georgia's formerly comparatively high level of economic development in the region.

Figure 4. Sectoral Composition of the RNFE in Georgia
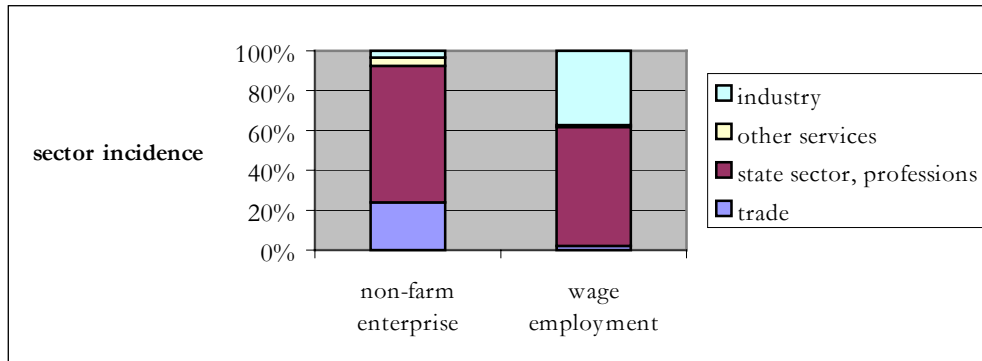
Source: survey findings

5 Analysis: assets, activities, and poverty

The previous section introduced the building blocks of rural households' livelihoods, and the distribution of these over regions and between poor and non-poor households. The patterns observed in Table 9 and Table 10 suggest some inferences on the nature of the rural non-farm economy. These will now be taken up in a more comprehensive analysis. We will ask two questions. First, what are the determinants of households' involvement in the rural non-farm economy? Second, how, if at all, do rural non-farm activities contribute to poverty alleviation?

It is useful to briefly set out some methodological decisions we made in addressing these questions. A first issue is to decide how to measure involvement in the RNFE. A number of candidates can be suggested:

(a)   Involvement as a binary (yes/no) variable, as indicated by deriving income from, or allocating labour to, non-agricultural activities;
(b)   income derived from non-agricultural activities, either in money units or as a share in total income;
(c)   labour allocated to non-agricultural activities, either in time units or as a share in total household labour time.

We have noted that agricultural incomes can be negative, in which case income shares cannot be calculated. This would exclude a fifth of the sample, with a strong bias towards excluding poor households (of 195 poor households, only 75 have non-negative agricultural incomes). This would be a disadvantage of using income shares.

When choosing between labour time and income as measures of the extent of involvement, it is useful to note that this analysis aims to provide guidance to policies fostering the economic benefits to rural households from participating in the rural non-farm economy. We are not primarily interested in providing advice on how to encourage households to allocate more time to rural non-farm activities. The two measures will largely, but not completely overlap. Gainful employment mostly, but not always, generates income (income can occasionally be zero). For these reasons, the amount of time allocated to various activities is not a useful measure for output purposes.

This leaves the choice between a binary of continuous measure for non-agricultural income (options (a) or (b) above). The latter is more informative since it reflects not only participation itself but also the extent in income term. However, it has conceptual and empirical drawbacks. Conceptually, the amount of income in money terms reflects not only a household's involvement in a gainful activity, but it is also directly correlated to total household income. As one of our aims is to study the relationship between poverty (which is defined by total income levels) and economic activity, a continuous measure which represents both the explanatory variable and the variable to be explained would be problematic. Statistically, we found that the data allow us to estimate the association of various factors with participation in non-agricultural activities with some statistical significance; but not its extent, as measured in a continuous income variable.

For these reasons, option (a) above was selected. The logistic specification, appropriate for binary dependent variables, was then employed (the 'probit' specification yielded very similar results).

The variables reflecting natural, human, physical, and financial capitals, presented in Table 8 and Table 9, were used as independents. Locational variables included dummies for the level of development and rural or peri-urban location (DEVELOPED and RURAL). Independent variables representing human capital included household size (HHSIZE), dependency ratio and male/female ratios (DEPRATIO and M_F_RATIO), average age (AGE), highest level of education (MAXEDU) and a dummy denoting households without adult men (WOMENHEAD). Variables representing wealth included the area of land (LAND), the value of productive assets (ASSETS), the number of livestock (ANIMALS) and amount of credit taken up in 2001 (LOAN). Possible synergies or trade-offs between agricultural and other activities were taken into account by including farm size in revenue terms (AGREV), and labour allocated to other activities (MIGLABOUR, ENTLABOUR, JOBLABOUR and AGLABOUR). Dependent binary variables are the incidence of income from farm-based non-agricultural activities, from non-farm wage employment, from non-farm enterprise, and from migration labour.

Table 11 presents the results of the four logistic regressions. Estimations were based on over 90 % of the sample observations; missing values were not imputed. Regressing each independent variable on the others tested for multicollinearity. With adjusted R^2 values below .60 multicollinearity appears not to be a concern. Estimations were performed with a backward stepwise selection based on a level of statistical significance of 10%. In interpreting the findings, it is useful to note that coefficient estimates reflect the statistical association between independent factors and households' involvement in the three non-agricultural activities analysed. Since there are scale unit differences between independent factors, comparisons between coefficient values are not meaningful. The discussion is therefore in terms of comparisons between the signs of the various coefficients[12].

There do not appear to be trade-offs between labour allocated to the non-agricultural activities, migration, other-farm based activities, and non-farm enterprise on the one hand, and labour allocated to agriculture on the other hand. The coefficient estimates for AGLABOUR all equal zero. This implies that households in the sample are not labour-constrained in agriculture, or, in other words, they are there underemployed. This is also true for labour allocated to wage employment and to enterprises or migration. This suggests that rural labour markets are far from tight, and the rural labour force is underemployed in all activities. The implication would be that constraints to expansion of the rural economy are not connected to shortage of labour supply.

Having more livestock, which necessitates year-round work, discourages both other farm-based non-agricultural activities and wage employment. Ethnically Georgian households also more often access both activities.

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[12] It is possible, based on these coefficients, to compute marginal effects of changes in independent factors, as point estimates at their sample mean values. But since such marginal effects would be associated with variables of different units, the interpretation would still be problematic. One could then compare, say, the magnitude of effects on the probability of wage employment of an extra hectare of land, an extra hundred hours per year worked in agricultural production, and a one unit higher education level in this sample. But in the absence of a feasibility and cost analysis of policies that would bring about such changes, such a comparison would have little added policy relevance. In order not to complicate presentation and discussion, we will here focus on the direction of effects, which can be straightforwardly compared, rather than on coefficient magnitudes.

Table 11. Factors in households' involvement in non-agricultural activities

independent variables	Coeff. estimates, standard errors			Regression statistics	
farm-based non-agricultural activities					
AGLABOUR	0.000	***	*0.000*	Number of obs	965
ANIMALS	-0.330	*	*0.128*	LR chi2(5)	100.95
DEVELOPED	1.454	*	*0.450*	Prob > chi2	0.000
FARMSIZE	0.001	***	*0.000*	Pseudo R2	0.3593
GEORGIAN	2.067	**	*1.053*	Log likelihood	-89.9925
M_F_RATIO	0.555	**	*0.275*		
MAXEDU	-0.268	***	*0.141*		
WOMENHEAD	1.173	*	*0.691*		
CONSTANT	-6.601	***	*1.324*		
waged employment					
AGLABOUR	0.000	***	*0.00*	Number of obs	965
ANIMAlS	-0.098	**	*0.04*	LR chi2(5)	211.13
DEPRATIO	-1.418	***	*0.28*	Prob > chi2	0
ENTLABOUR	0.000	*	*0.00*	Pseudo R2	0.159
GEORGIAN	0.431	**	*0.18*	Log likelihood	-558.235
HHSIZE	0.242	***	*0.05*		
MAXEDU	0.339	***	*0.04*		
MIGLABOUR	0.000	***	*0.00*		
CONSTANT	-2.438	***	*0.31*		
non-farm enterprise					
AGLABOUR	0.000	*	*0.000*	Number of obs	965
M_F_RATIO	0.329	***	*0.104*	LR chi2(5)	11.79
CONSTANT	-1.827	***	*0.161*	Prob > chi2	0.0027
				Pseudo R2	0.0135
				Log likelihood	-432.364
migration labour					
DEVELOPED	0.771	***	*0.182*	Number of obs	966
GEORGIAN	-0.578	***	*0.189*	LR chi2(5)	35.83
RURAL	0.511	***	*0.188*	Prob > chi2	0.000
CONSTANT	-1.200	***	*0.163*	Pseudo R2	0.0359
				Log likelihood	-481.391

*Note: *** statistical significance, $p < 0.01$; ** statistical significance, $p < 0.05$; * statistical significance , $p < 0.10$*
Source: survey findings and authors' calculations

Interestingly, these are the only common effects on both other farm-based non-agricultural activities and wage employment. All other important variables differ for the two RNF activities. Wage employment is mainly determined by human capital factors, and is more likely among households that have fewer dependents, larger households, and better education levels. Non-farm enterprises are more frequent among households that are located in better developed areas, with larger farms, and more men. Also households with lower education levels and those without adult men more often have these activities. The latter findings suggest that independent non-farm activities may represent a poverty-refuge option, practised by household without sufficient human capital to enter, for instance, wage employment.

This brings us to the second analytical question. How, if at all, do rural non-farm activities contribute to poverty alleviation? This possible connection, and its complex nature, has been the rationale for much recent research into the RNFE. We will analyze it by looking at the association of a household's assets and economic activities with its risk of poverty. The appropriate analysis is again a binary logit regression, where the dependent variable reflects whether (1) or not (0) a household is in poverty, as defined by a per capita income level in the lowest quintile. The pattern of a household's economic activities is captured by variables indicating their having income (1) or not (0) from non-farm enterprise (ENTERPRISE), wage employment (JOB), and migration (MIGRATE). We include the 'capital' variables reported on above, which plausibly also bear on the risk of poverty, and the number of income sources. Testing revealed that the male/female ratio should be excluded due to multicollinearity. Estimations were then performed both with backward stepwise selection based on a level of statistical significance of 10%. Table 12 presents the estimation results. Model fit appears to be good and the number of missing observations is not so large as to warrant imputation. The interpretation of findings is that coefficients with a negative sign imply that the presence of (or increase in) the associated factor decreases the risk of poverty. Again, it is the sign rather than the value of the coefficients, which we will discuss here (see footnote 1).

Table 12 Factors affecting the risk of poverty

Variables	Logit coefficient estimates (s.e.)	
DEVELOPED	-1.272***	0.346
RURAL	-0.567**	0.272
AGREV	-0.006***	0.001
HHSIZE	0.236***	0.062
DEPRATIO	-0.614*	0.336
MAXEDU	-0.137**	0.060
AGLABOUR	0.000***	0.000
ENTLABOUR	-0.003***	0.001
JOBLABOUR	0.000***	0.000
CONSTANT	0.190	0.373
Number of obs	947	
LR chi2(5)	298.51	
Prob > chi2	0.000	
Pseudo R2	0.3241	
Log likelihood	-311.299	

*Note: *** statistical significance, $p < 0.01$; ** statistical significance, $p < 0.05$; * statistical significance , $p < 0.10$*
Source: survey findings and authors' calculations

The statistics show that model fit is good. We will discuss four sets of factors relevant to our understanding of the causes of poverty in rural Georgia: location, farm features, human capital, and the pattern of economic activities.

Unsurprisingly, households in better-developed areas have a lower risk of poverty. This is also true, though less clearly statistically, for household in peri-urban areas. As we have

seen above, this may well be associated with the better access to migration labour and wage employment that such localities offer.

Larger farms, in revenue terms, imply a smaller risk of poverty. This intuitively clear finding underlines the importance of viable farming structures to alleviating poverty.

Larger households in the sample are more at risk from poverty, which is a finding common to many studies on poverty. Better education helps prevent poverty. We also find some evidence that more dependents is associated with a lower risk of poverty. This association needs to be considered cautiously as it is statistically weak; also subsequent reflection suggests that its interpretation is not straightforward. However, one possible explanation of such a result could be the greater access to pension payments or child benefits that a pensioner or young child contributes to the household. This implies higher incomes, lifting some household out of income poverty as we have defined it. Since more household members also require higher consumption levels, it is open to question as to whether a higher dependency ratio also implies an increase in consumption and well-being more broadly interpreted.

There is no additional effect on the risk of poverty from being more heavily involved, in terms of labour allocation, in either wage employment or agriculture. In the case of agriculture, this is understandable since, as Table 11 showed, there is hardly a difference in labour allocation to agriculture between poor and non-poor households. In case of wage employment, there is a large difference, but the effect of wage employment on risk of poverty is likely already captured by human capital variables.

6   Conclusions and Policy Implications

There is an increasing awareness of the importance of non-farm employment activities in the rural economy among multilateral donors and NGOs. In Georgia, a sizeable proportion of population derives a living from agriculture and the rural households in our study depend on non-farm sources for 65% of their income on average. There is also in Georgia the potential for an increased role for the non-farm rural economy in livelihood strategies, as there is still an acute dependence on remittances in many households for livelihood security. Although most Georgian rural dwellers are poor in terms of assets and financial capital, their use of social networks, the quality of their physical resources and access to labour make RNF employment a potentially important livelihood-enhancing activity. Employment in agriculture and other activities in rural areas is under-utilized. It is therefore important to increase the use of labour by enhancing production in the agricultural sector and in off-farm activities in rural areas.

1.   An annual income from farm sales of around GEL 500 for a family comprising 4-6 people, as found in our earlier case study work (Davis et al, 2002) might be marginally sufficient for meeting basic needs, but certainly inadequate for even minor investment in the development of the farm or a RNF enterprise. Some of the larger farms we observed often have to hire additional labour and the proportion of turnover taxes they have to pay for employees (social insurance, medical insurance, unemployment fund fee etc.) is high. For the smaller peasant farms and RNF micro-entrepreneurs hiring external labour would simply be unviable; and therefore the informal labour sharing agreements reached between relatives and neighbours ensures the financial viability of peasant farming and nascent rural non-farm activities.

2.   Although Georgia's rural population, including farmers, face low farm-gate and retail prices, the average consumers' capacity to pay a premium for rural produce will remain limited due to the prevalence of significant income constraints resulting from high poverty levels. The depressing effect on demand for food products is exacerbated by taxation, which inflates retail food prices. The lack of available income at the household level for on- and off-farm investment in production will inhibit the process of upgrading agricultural production and shifting from subsistence to more commercially-oriented agricultural and non-farm activities.

3.   Currently, tax collection rates in Georgia are extremely low (around 14%), compared to other CIS transition economies. The panoply of taxes, their complexity and the financial burden encourages tax evasion by rural dwellers. Indeed, for most rural people in our survey, the payment of all due taxes would make their farm enterprise financially unviable. To some extent, the current taxation system reinforces the subsistence structure and barter transactions characteristic of peasant farming in Georgia. The government should consider making subsistence agriculture exempt from any kind of taxation (VAT, income tax, entrepreneurial tax, etc.) at its current stage of development. One option is that a flat fee for land taxes be implemented

4.   Besides development obstacles that may be associated with RNFE access constraints due to a lack of financial, social and human capital, others include: insufficient road, communication and market infrastructure; deficient price information systems, a lack of extension and other consulting services offering technical expertise.

5. Livelihood diversification among rural households dependent on subsistence farming also needs to be encouraged. Poverty is high in Georgia and the government is still in the process of developing an appropriate strategy for addressing this. Clearly, our study shows that household expenditures are dependent on farm production income in the most vulnerable households. Those households with diverse sources of income, particularly with access to non-farm income (pensions, off-farm jobs, handicrafts production etc), appear better placed to cope with hardship, poverty, and increased livelihood insecurity.

6. Apart from the government (regularly) paying state employees their salaries (particularly rural hospital workers, doctors and teachers), it should consider a number of potential interventions: investment grants for rural entrepreneurs starting or developing a business; and the subsidisation of start-up activities provided by small business development centres or business incubators for the benefit of rural SMEs.

7. In Georgia, but also most of the other CIS countries, some of the social problems related to agricultural reform, e.g. high hidden unemployment, an ageing rural demographic structure, and low incomes need to be addressed by an effective "job creating" rural development strategy which helps retain and usefully employ the younger rural population. Georgia does not have a coherent rural development strategy, and thus the potential for livelihood diversification and non-subsistence farming potential is reduced.

8. Georgian RNF entrepreneurs (mainly traders and agri-processors) and peasant farmers have not organised themselves for marketing purposes. They will need to do so in the future to exploit the potential benefits of globalisation; although there appears to be some cultural resistance to community based organisations (CBO) in Georgia, possible deriving from the recent past in which collective efforts were associated with political repression.

9. The development of CBOs will be necessary to provide mutual support, to deliver exportable volumes, and to organise inputs and credits. Farmer or producer associations/organisations have been set-up or revived because they are needed for rural producers to effectively participate in the global marketplace. When organised, the poor, micro-entrepreneurs and peasant farmers can benefit from a better negotiating position and gain access to better market information. This will require some institutional support and efforts at local capacity building.

10. Most of our respondents have on average achieved high-school level qualifications. It is not clear that they are necessarily representative of the rural population in general, but there does not appear to be a constraint in human capital when it comes to education. Neither is there a labour constraint. Sufficient access to on-farm labour (e.g. family labour), was not identified as a problem. However, off-farm opportunities in rural Georgia are scarce.

Requirements for development of the RNFE

- In addition to improvements in the macroeconomic environment, the RNFE's position would be greatly improved by developments in the rural product marketing system itself. Firstly, by a reduction in the overall level of uncertainty in the economy, which currently prevents the development of long-term relationships with producers. In addition to macroeconomic stabilisation, developments in contract law and advances in the quality and availability of market information are

critical in offsetting the impacts of uncertainty and corruption during the transition.

- Improvements in the competitive environment will also help to reduce fluctuations in prices and costs. Most critically for all RNF firms and producers, further demonopolisation (an increase in the number of buyers and sellers, and the development of codes of conduct for product purchase) would increase competition in peri-urban and eventually rural areas.

- An important step in this direction would be made if rural producers were less fragmented in their marketing activities: the development of producer organisations or marketing groups would allow more equitable and transparent formulation of prices and product delivery requirements. At the national level, an organisation could be formed to promote Georgian products and develop agricultural processed food export markets. The continuing isolation form the Russian markets makes this an urgent development.

- Another long run goal should be training of the rural population in the principles of enterprise book-keeping, marketing, distribution and quality control in the new environment. In particular, the implications of product diversification have not been fully assessed in terms of competitiveness and financial viability.

Recommendations for government policy toward the RNFE

In section 2.2 of this study, we outlined some of the key constraints on the RNFE and rural development in Georgia. In addressing these problems, the role of government should include:

- The creation of an "enabling environment", entailing a low inflation, incentive-oriented agriculture within a legal system based upon property rights. This task entails accelerating privatisation and land reform, passing legislation on contracts and commercial behaviour, and reducing the state's presence in the markets. A move toward neutral policies which do not favour imports is required;

- Assistance to private initiatives to develop export markets and generate export market intelligence;

- Assistance with restructuring. Technical assistance could be employed in training and development of business plans. A programme of tax relief or deferral would provide incentives for former state RNF firms to restructure quickly;

- Careful attention to the credit problem. Allowing firms to retain hard currency, tax relief, and assistance through general banking reform should be followed by examination of various options for a credit programme. Participation in the credit programme should be dependent on progress with commercially oriented restructuring.

- Cash shortages cannot yet be overcome by attracting partners or investors because the commercial environment for agriculture is not yet sufficiently developed as macroeconomic instability and energy shortages persist. Government can assist with tax relief and deferral, which will probably yield higher tax revenues in the long run.

- A credit programme could be investigated, but not before proper agricultural capital markets based on land ownership have been established.

- During transition and the civil war, many RNF firms have probably lost some of their export markets in the FSU and need to create new market links as well as re-

establishing old ones. Government can assist by providing information and contacts, as well as financial support to such initiatives.

- Relationships with producers need to be developed in line with Georgia's new, fragmented farm structure. Producer co-operation and national associations of producers and processors should be encouraged.

In addition to the above, Georgia will require donor and NGO assistance in exploiting the growth potential of the RNFE through the development of appropriate local economic development initiatives:

Investment in Hard Infrastructure: Improving the built environment for businesses and households, including roads, transport services, industrial and potable water, waste disposal, energy systems, telecommunication systems, crime prevention equipment (e.g. street lighting), commercial and industrial sites, and community amenities (parks, etc.).

Investment in Soft Infrastructure. Improving the commercial environment for businesses through, for example, regulatory reform, skills training and business-focused education, research and development, "one-stop shop" advisory services, business networking, guidance to accessing capital and finance sources.

Cluster (and Sector) Development. Focuses on facilitating linkages and interdependence among firms (including suppliers and buyers) in a network of production and sale of products and services. Increasing market pressures to compete and innovate, encouraging industries (often export-oriented firms) regionally to collaborate through buyer-supplier relationships, shared institutional development and regional economic infrastructure, knowledge flow and training linkages. Local governments can collaborate regionally and become a facilitator of industry networking by bringing actors together.

Targeting Poor and Disadvantaged Populations. Programs to mainstream the poor and disadvantaged populations into the economy. Ensuring that new growth industry extends employment opportunities to low income workers (including the "informal sector"), and that such workers have access to and can take advantage of opportunities for advancement.

Regeneration Strategies. Targeting communities that have suffered from structural change such as loss of a major employer (e.g. closure of agri-processing firms as sole employer for some Georgian towns) or disaster stricken areas (e.g. local area recovery in western Georgia from devastation by drought).

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