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Georgia
Sustaining Rapid Economic Growth
Country Economic Memorandum

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Currency Equivalents
(Exchange Rate as of July 9, 2013)

Currency Unit	Georgian Lari
US$1.00	1.6553 GEL

Weights and Measures: Metric System

Abbreviations and Acronyms

BEEPS	Business Environment and Enterprise Performance Survey
CEM	Country Economic Memorandum
CIS	Commonwealth of Independent States
CMT	Cut-Make-Trim
COMTRADE	UN Commodity Trade Database
DCTFA	Deep and Comprehensive Free Trade Agreement
EAP	East Asia Pacific Region
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia
EC	European Commission
EU	European Union
FDI	Foreign Direct Investment
GNERC	Georgian National Energy Regulatory Commission
GDP	Gross Domestic Product
GEL	Georgian Lari
IDA	International Development Association
IMF	International Monetary Fund
NPL	Non-Performing Loans
ODM	Original Design Manufacturing
OEM	Original Equipment Manufacturing
PPPs	Public-Private Partnerships
R&D	Research and Development
SME	Small and Medium Enterprise
TBD	Technical Barriers to Trade
TFP	Total Factor Productivity
TSA	Targeted Social Assistance
VAT	Value Added Tax

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Preface

This Country Economic Memorandum (CEM) is a synthesis of work on the sources of growth and development prospects in Georgia. The analysis has been conducted in close coordination with Government counterparts. Earlier drafts and other intermediate outputs, including power-point presentations, policy notes, and missions have been used to support the continuous dialogue on growth-related policies facing Georgia.

This CEM was prepared by a Bank team comprising Faruk Khan (task team leader), Norman Loayza, Nadeem Karmali, Tomoko Wada, Erwin Tiongson, Ramya Sundaram, Premachandra Athukorala, Jose Guilherme Reis, Kym Anderson, Zviad Kvivlidze, and Mariam Dolidze. The primary authors of the report are Faruk Khan and Norman Loayza (chapter 1), Nadeem Karmali (chapter 2), Erwin Tiongson and Ramya Sundaram (chapter 3), Premachandra Athukorala, Kazi Matin, Swarnim Wagle, Jose Guilherme Reis, and Gonzalo Varela (chapter 4), Zviad Kvivlidze (Appendix A), and Kym Anderson (Appendix B). Zakia Nekaien-Nowrouz assisted with formatting the report and Tamuna Namicheishvili provided valuable support to the team.

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Executive Summary

Sustaining rapid economic growth for reduced poverty and shared prosperity over the next decade and beyond in Georgia is an important goal and a key challenge for the authorities. Economic growth averaged 6.1 percent a year during 2004–12 and GDP per capita increased from $920 in 2003 to $3,500 in 2012 in current prices, lifting average living standards and raising popular aspirations. But while per-capita incomes rose substantially since 2004, real GDP in 2012 was still only 78 percent of its 1990 level and Georgia remains one of the lowest income countries in the ECA region. Unemployment remained high at about 15 percent in 2012 and the incidence of poverty was around 18 percent in 2011. Meeting the aspirations of the population and setting the country on a robust convergence path toward the EU10 countries that joined the EU during the 2000s will require sustaining rapid and inclusive growth in Georgia for an extended period of time.

While the record of growth over the last decade has been strong, the forces that drove this growth are unlikely to be sustained in the coming years. The size and sources of financing for capital accumulation and the sources of productivity growth in Georgia to date reflected an exceptional period in the global economy and at home and will be problematic to sustain. Investment and accumulation since 2004 have been financed in large part by foreign direct investment (FDI) and other capital flows, leading to a large current account deficit. Even after FDI inflows fell following the 2008–09 global economic crisis, the current account deficit remained above 10 percent of GDP. Such high levels of external imbalances are difficult for any economy to sustain for an extended period of time. It is even more challenging for a small open economy such as Georgia because of the added geopolitical uncertainties. The sources of productivity growth since 2004 are also likely to have largely run their course. While Georgia benefited from a productivity spurt that is usually observed in transition economies after broad-based market reforms are launched, productivity improved primarily in the nontradable sectors, while export sophistication and quality stagnated. Important drivers of firm-level productivity growth in manufacturing, including allocative efficiency and productivity over the firm lifecycle, have also been missing in Georgia.

Sustaining strong growth in Georgia going forward will require new policies that help support both high investment financed increasingly from domestic sources as well as sustained rapid productivity growth in the tradable sectors. Given the starting position of Georgia, achieving such an outcome will require effort. For example, sustaining growth of 5 percent per year during 2013–17 will require combining investment of more than 30 percent of GDP with TFP growth of more than 3 percent per year. Georgia has not established a sustainable source of financing for investment of 30 percent of GDP in recent years and while productivity growth was faster than 3.5 percent per year over the last decade, most of this was a one-off spurt in productivity from the post-Rose Revolution reforms.

Ensuring a more sustainable source of financing for investment and accumulation will require raising low rates of national savings in Georgia. With a sustainable current account deficit, maintaining growth of 5 percent over an extended period of 15 years (2013–27) will require raising national savings from the current 17.5 percent of GDP to 27 percent by 2017. Reform options to raise national savings will need to target increases in both public and private savings. Increasing public savings will require a shift in the fiscal framework toward lower growth of current expenditures and higher growth of capital expenditures. Increasing private savings will require

Table 1: Reform Options to Support Sustainable Growth

Overall Requirements to Sustain Strong Economic Growth		
Overall investment, productivity, and savings requirements to sustain growth	Sustain GDP growth of at least 5 percent per year during 2013–17 by combining investment of more than 30 percent of GDP with TFP growth of more than 3 percent per year	Sustains GDP growth above 5 percent per year during 2013–17 and 2013–27
	Raise national savings to 27 percent of GDP by 2017 and 29 percent by 2027 in order to sustain growth above 5 percent per year over the next 15 years.	
Policy Area	**Reform Option**	**Expected Impact**
Savings	Shift medium term fiscal framework to one with lower growth of current expenditures, where expenditure consolidation during 2013–15 comes from an equal mix of current and capital expenditures	Raise public savings
	Improve the incentives for private retirement savings by setting expectations for growth the basic pension benefit at sustainable levels, introducing an opt-out supplementary savings scheme, and developing capital markets to widen availability of financial instruments for long term saving.	Raise private savings over time
	Put in place macroprudential regulation, such as capital/liquidity requirements, asset concentration/credit growth limits, and loan eligibility criteria, to curb unsustainable credit-fueled consumption booms in the future	
Firm-level productivity growth	Improve the ease of closing a business, as productive resources are otherwise stuck in unproductive uses	Create environment for improved allocative efficiency and productivity growth over the firm lifecycle
	Reduce high borrowing costs and lari bank spreads by lowering NPLs, inducing bank entry and competition, taming inflationary expectations, and generally improving confidence in the banking sector and the local currency	
	Improve the mechanism of electricity pricing through more transparent and independent regulation to further move toward cost-based pricing and lower spreads between retail and wholesale tariffs	
Improved deployment of labor resources	Strengthen job matching services to reduce search costs and alleviate skills mismatches	Improve productivity by moving workers from less productive to more productive activities and by improving worker productivity overall
	Equip workers with more relevant skills by strengthening the vocational education system and by improving overall education quality	
Productivity and growth of exports and tradables	Address persistent overvaluation of the real exchange rate by using periods of market stability to build international reserves.	Improve productivity and growth of export and tradable sectors
	Pursue trade-related reforms to facilitate Georgia's exports to the European Union and other international markets	
	Improve trade and logistics infrastructure to levels of leading middle income countries and improve internal infrastructure to better connect secondary and rural areas to international markets	
Sector-Specific Reforms	Support targeted vocational education efforts to improve technical skills of workers, managers, and specialized personnel in the apparel and wine sectors	Address sector-specific constraints, facilitate exports and employment generation
	Support targeted investment promotion and marketing efforts to attract FDI, build recognition, and otherwise interact with international partners	

macroprudential regulations to curb unsustainable consumption booms and a multifaceted array of measures to stimulate private savings for retirement. The latter include limiting growth of the basic pension benefit, introducing an opt-out supplementary savings scheme, and developing capital markets to widen availability of financial instruments for long term savings.

Sustaining rapid productivity growth of tradables will require reforms to address firm level constraints to improved allocative efficiency and productivity over the firm lifecycle. Addressing firm-level constraints including improving the ease of closing a business, reducing high borrowing costs, and improving the mechanism of electricity pricing can help to create an environment for improved allocative efficiency and productivity growth over the firm lifecycle. Both of these important drivers of productivity growth at the firm level have been found missing in Georgia in recent years.

Supporting productivity growth will also require improved skills and deployment of workers that would also support employment generation and more inclusive growth going forward. Georgia has a large pool of workers that are either unemployed or employed in low productivity activities. At the same time, firms complain about the lack of workers with adequate skills. Improving the vocational education system can improve worker productivity and move workers from less productive to more productive activities. Strengthening job matching services can also reduce mismatches between jobs and workers. Both of these initiatives would support more robust employment generation and thereby ensure that growth contributes to poverty reduction and shared prosperity going forward.

Expanding productivity and growth of exports will require ensuring price competitiveness, enhancing market access, and improving logistics infrastructure. Beyond economy-wide supply constraints, exports in Georgia have been constrained by an appreciating exchange rate, non-tariff barriers in destination markets, and logistics and transport costs. Productivity and growth of exports can, therefore, benefit from addressing persistent overvaluation of the currency, trade-related reforms to enhance access to destination markets, and further improving trade and logistics infrastructure. An analysis of select sectors with strong export and employment generation potential in Georgia, including apparel and wine, indicates that targeted vocational training and investment promotion can support the growth of these sectors.

Despite strong growth, challenges remain in sustaining growth and promoting shared prosperity

Strong growth in Georgia since 2004 has been driven in large part by capital inflows and the nontradable sectors, thus posing a challenge for sustainability. Since 2004, far-reaching structural reforms to improve the business environment, liberalize trade, upgrade infrastructure, and strengthen public finances helped boost growth to 9.3 percent per year during 2004–07. Foreign direct investment (FDI), encouraged by the improved business environment and a favorable global economy, was one of the main drivers of Georgia's boom during this period, with FDI inflows reaching 16.5 percent of GDP in 2007. After the economic downturn of 2008–09, fiscal stimulus and an improving external environment helped growth rebound to 6.5 percent per year during 2010–12. At the same time, the sustainability of strong growth in the medium term is a key challenge for Georgia. Growth during 2004–12 has been largely been powered by services, construction, and nontradables in general. Manufactured exports have not expanded rapidly as a share of GDP during this period and total exports have remained under 40 percent of GDP. While the current account deficit has narrowed from a peak of 22 percent of

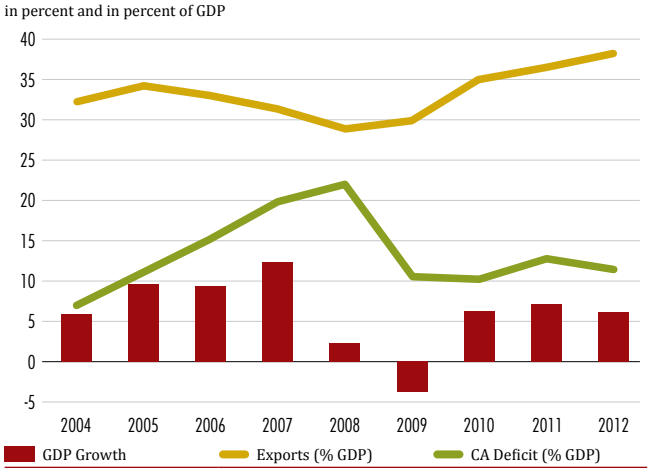
Table 2: Georgia: Selected Economic Indicators, 2003–2012

in percent of GDP, except where noted

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012p
Nominal GDP (Million of Lari)	8,564	9,824	11,621	13,790	16,994	19,075	17,986	20,743	24,344	26,139
GDP per capita (US$)	919	1,188	1,483	1,760	2,315	2,920	2,455	2,623	3,230	3,520
Unemployment Rate	11.5	12.6	13.8	13.6	13.3	16.5	16.9	16.3	15.1	14.7
GDP Growth Rate	11.1	5.9	9.6	9.4	12.3	2.3	-3.8	6.3	7.2	6.1
CPI (e.o.p.)	7.0	7.5	6.2	8.8	11.0	5.5	3.0	11.2	2.0	-1.4
Investment (% GDP)	31.3	31.9	33.5	30.9	32.1	26.0	13.0	21.6	26.2	29.0
Gross National Savings (% GDP)	21.7	25.0	22.4	15.7	12.3	4.0	2.5	11.3	13.4	17.5
Fiscal										
Revenues and Grants	16.0	23.1	24.4	26.7	29.3	30.7	29.3	28.3	28.2	28.8
Tax Revenues	14.6	19.7	20.8	22.9	25.8	24.9	24.4	23.5	25.2	25.4
Expenditure and Net Lending	17.5	20.7	26.0	29.8	34.0	37.0	38.4	34.7	31.7	31.8
Current Expenditure	14.7	15.8	20.1	22.2	25.0	28.5	30.1	25.9	23.0	23.1
Capital Expenditure and Net Lending	2.8	4.9	5.9	7.6	9.0	8.6	8.4	8.8	8.8	8.7
Overall Fiscal Balance	-1.5	2.4	-1.5	-3.2	-4.7	-6.3	-9.2	-6.5	-3.5	-2.9
Privatization Receipts	0.4	0.7	3.6	5.2	5.2	3.7	2.0	1.1	1.6	1.1
External										
External Current Account Balance	-9.6	-6.9	-11.1	-15.2	-19.8	-22.0	-10.5	-10.2	-12.7	-11.5
Exports of Goods and Services	32.3	32.1	34.1	32.9	31.3	28.8	29.8	34.9	36.5	38.2
Imports of Goods and Services	46.8	48.6	51.8	57.0	58.2	58.6	48.9	52.7	55.5	57.8
FDI Inflows (% GDP)	8.3	9.4	8.5	15.3	16.5	11.1	6.3	5.8	6.2	3.8
FDI Inflows (M US$)	331	483	542	1,186	1,674	1,418	677	679	902	603
Intl Reserves (Mo of Impts of G&S)	1.1	1.7	1.7	2.4	2.8	2.4	4.8	4.4	4.2	3.8
Intl Reserves (M US$)	174	352	474	881	1,361	1,480	2,111	2,265	2,818	2,873
Debt										
External Public Debt 1/	44.9	36.2	27.1	21.9	17.6	21.0	31.4	33.8	29.1	27.9
Total Public Debt	55.2	45.3	34.4	28.0	22.4	25.1	37.0	39.3	34.0	32.6
External Private Debt		5.5	5.6	16.0	21.2	23.5	27.3	29.1	29.8	33.3
Total External Debt		41.7	32.7	37.9	38.8	44.5	58.7	62.9	58.9	61.2

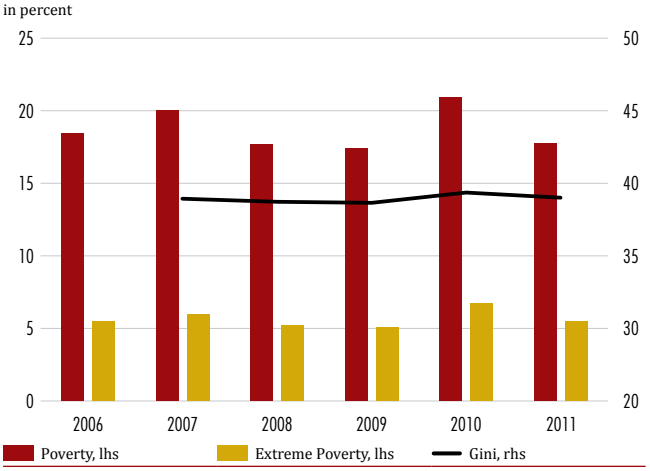
Source: Georgian authorities and World Bank staff estimates.
Notes: p=preliminary; 1/ public and publicly guaranteed.

Figure 1: GDP Growth, Exports, Current Account Deficit



Source: Georgian authorities and WB staff estimates. Poverty incidence calculated using the national absolute poverty line and annual household surveys.

Figure 2: Poverty Incidence and Inequality



Source: Georgian authorities and WB staff estimates. Poverty incidence calculated using the national absolute poverty line and annual household surveys.

GDP in 2008, it has remained large at 10–12 percent of GDP during 2010–12. Sustaining growth going forward will, therefore, require engineering a shift in the growth model toward one financed more from domestic savings and driven by tradables.

Poverty and inequality have remained high in Georgia, with limited employment generation a key constraint in reducing poverty and promoting shared prosperity. The incidence of poverty (measured by the share of households with consumption below an absolute poverty line) remained high at 18–20 percent during 2006–11. The incidence of extreme poverty remained in the range of 5–6.5 percent during this period.[1] Furthermore, inequality remained relatively flat during this period, with the Gini coefficient in the range of 38–39 percent. Although growth during this period was interrupted by the crisis of 2008-09, even considering the earlier boom years, it is noteworthy that the strong growth record in Georgia has had only a modest impact on reducing poverty and promoting shared prosperity. In fact, the growth incidence curves during the boom years indicate that growth was not pro-poor. The key factor responsible appears to be limited net employment generation in Georgia, with the incidence of poverty varying considerably with employment status. In 2011, the incidence of poverty was 10.8 percent among those households engaged in wage employment, 15.6 percent for the self-employed, and 24.2 percent for the unemployed. Clearly, reducing poverty and promoting shared prosperity in Georgia will require sustaining a new pattern of growth with considerable employment generation going forward.

Sustaining strong growth will require high investment and rapid productivity growth

Given Georgia's aging labor force, the demands on both investment and productivity growth are very high to sustain a target GDP growth rate going forward. Estimates based on a growth accounting framework suggest that sustaining 5 percent growth during 2013–17 will require combining an investment rate of 30 percent of GDP with total factor productivity (TFP) growth of 3.1 percent. If the investment rate is lower, the necessary TFP

1 The poverty line in Georgia is GEL 70.8 per adult equivalent per month and the extreme poverty line was GEL 41.1 per adult equivalent per month in 2007 prices.

growth is higher at 3.6 percent. If the target growth rate is 7 percent, the demands on investment and TFP growth are even more daunting. Although Georgia experienced TFP growth of 3.7 percent during 1999–2012, these years were associated with the temporary productivity spurt following reforms and transition. Generating a similar or higher TFP growth rate going forward will be a formidable task. In more mature transition economies or other emerging markets, a TFP growth rate of 2–2.5 percent is more natural.

Table 3: Georgia: Growth Scenarios for 2013–17

in percent

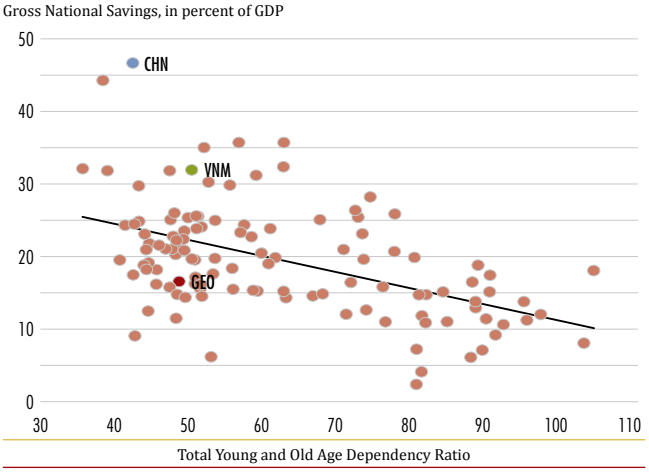
Growth	Investment (% GDP)	TFP Growth
5.0	20	4.2
5.0	25	3.6
5.0	30	3.1
5.0	35	2.6
7.0	20	6.0
7.0	25	5.5
7.0	30	4.9
7.0	35	4.4

Source: Staff estimates.

Financing sustained high investment will require raising low rates of national savings

The low national saving rate in Georgia is an impediment to maintaining adequate investment and growth. During 1999–11, the national saving rate in Georgia was significantly below that of countries with similar age dependency ratios and income levels. This meant that investment and growth could only be supported during this period by financing a wide current account deficit, which is difficult to sustain over time. Since investment has to be financed in large part by national savings in the long run, sustaining growth of 5 percent over an extended period 2013–27 will require an increase in national savings from the current 17 percent of GDP to about 27 percent of GDP by 2017 and further to 29 percent by 2027. At the same time, it will be important to continue attracting FDI to ensure a stable source of financing for the savings investment gap.

Figure 3: Cross-country variation in saving rates and age dependency ratios, 1999–11

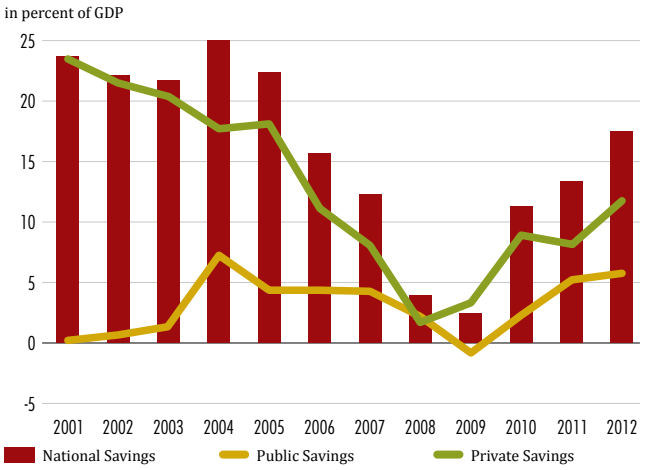


Source: Bank staff estimates.

The sharp decline in national savings during 2005–09 in Georgia can be explained by overly optimistic expectations, abundant availability of credit, and a decline in public savings. National savings declined from about 24 percent of GDP during 2004–05 to a low of 2.5 percent in 2009. Most of this decline occurred during the pre-crisis period when private savings fell from 18 percent of GDP in 2005 to 8 percent in 2007. One explanation for this sharp decline in private savings is the increased optimism after 2004 about future growth prospects. The second explanation is the sudden and abundant availability of private domestic credit. Both of these factors fueled a household consumption boom and therefore a decline in household savings. Corporate savings also declined because of overly optimistic expectations as corporations increased dividends faster than profits. Public savings also declined after 2007 as current expenditures were raised in a countercyclical fiscal response and this led to further erosion of national savings to a low of 2.5 percent of GDP in 2009.

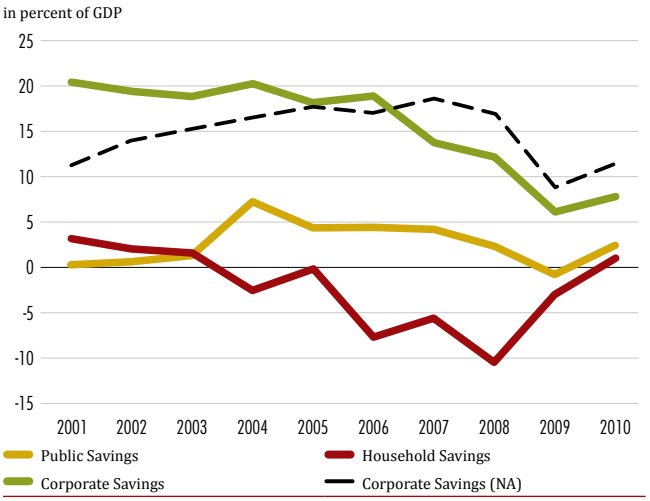
Raising public saving going forward will require a shift in the fiscal framework to control growth of current expenditures, which would have ramifications for planned expansion of social protection and health expenditures. Raising national savings going forward will require an increase in both public and private savings. The clearest instrument over which the government has control is, of course, public savings. However, any increase in public savings requires reining in current expenditures. The authorities have begun to implement a considerable expansion of social protection and health expenditures, such that the medium term fiscal framework actually projects an increase in current expenditures from 23 percent of GDP in 2012 to 24 percent by 2015. The fiscal deficit, on the other hand, is projected to decline from 3 percent of GDP in 2012 to 2 percent by 2015 primarily through a reduction of capital expenditures from 8.7 percent of GDP in 2012 to 6 percent in 2015. As a result, the burden of expenditure consolidation falls more than 1-for-1 on capital expenditures and public savings is actually projected to decline from 5.7 percent of GDP in 2012 to 4 percent in 2015. Raising public savings will require a shift in the fiscal framework toward one where current and capital expenditures make at least similar contributions to expenditure consolidation going forward.

Figure 4: National, Private, and Public Savings



Source: Georgian authorities and WB staff estimates.

Figure 5: Corp, Household, and Public Savings



Source: Georgian authorities and WB staff estimates.

Avoiding sharp falls in private saving going forward will require macroprudential regulations to curb unsustainable credit-fueled consumption booms. Recent work on evaluating policies to curb unsustainable credit-fueled consumption booms points to the effectiveness of macroprudential regulation. Specific macroprudential policies that have demonstrated success in limiting unsustainable credit booms include capital and liquidity requirements, asset concentration or credit growth limits, and loan eligibility criteria. While Georgia has begun putting in place some elements of such macroprudential policies, it will need to actively manage their countercyclical nature should another unsustainable credit-fueled consumption boom unfold in the future.

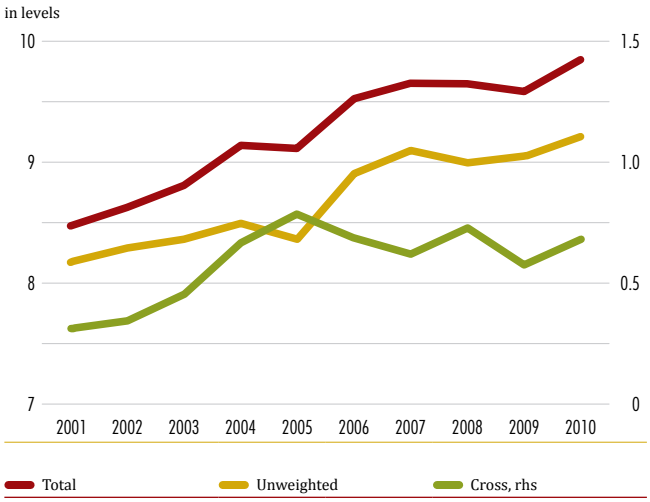
Increasing private saving will require measures to support retirement savings. Pension reform is a multifaceted subject that requires critical attention in order to improve private saving prospects in Georgia. The high and rising old age population means that savings for retirement should be an important structural motivation for private saving in Georgia. A key pension reform option is to combine limited growth of the basic pension benefit with a mechanism to encourage voluntary savings for retirement. Limiting growth of the basic benefit can not only encourage private saving, but it can also limit erosion of public savings by reducing current expenditure

obligations. In order to enhance participation in a voluntary retirement scheme, one strategy is to have automatic enrollment with the option of opting out, rather than have individuals explicitly opting in. The international evidence indicates that participation in opt-out systems can approach 85–95 percent while that in opt-in systems can be between 40–70 percent. Another important area that requires attention in voluntary pension schemes is the availability of sound long term investment instruments and capital markets development more generally. The lack of long term investment instruments is particularly acute in Georgia, and current pension funds earn low returns. The lack of long term savings reflects a low level of trust in domestic financial markets. Addressing this will require an extended period of financial stability, but it will also require efforts to identify sound instruments for long term retirement savings in Georgia.

Sustaining rapid productivity growth will require addressing firm-level constraints

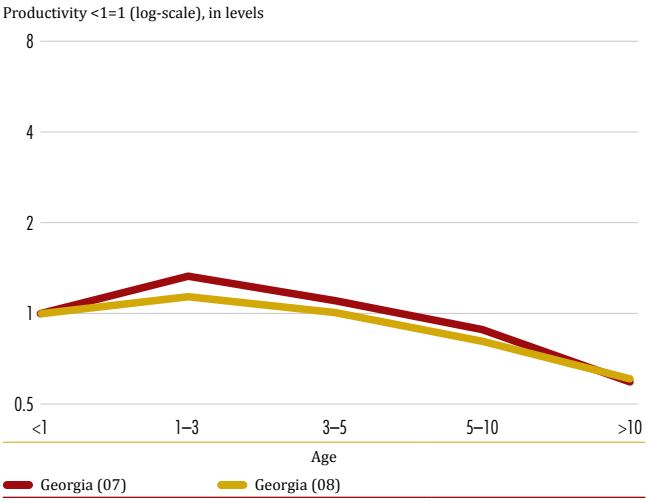
Stagnant firm-level allocative efficiency since 2005 and limited productivity growth over the firm lifecycle raise concerns about the prospects for productivity growth in Georgia. Allocative efficiency is a measure of how efficiently factors of production are allocated. In the manufacturing sector in Georgia, allocative efficiency has remained stagnant since 2005. This suggests that the process of productivity-enhancing creative destruction and reallocation that is a key driver of productivity growth has been absent in Georgia. Furthermore, an analysis of productivity over the lifecycle of firms indicates that while firms in other countries usually become more productive with age, older firms in Georgia are actually less productive than younger firms. In spite of the impressive reforms implemented in Georgia since 2004, the stagnation in allocative efficiency since 2005 and perverse firm lifecycle productivity patterns suggest that additional reforms from the perspective of enhancing market efficiency will be needed to unleash the process of creative destruction in manufacturing.

Figure 6: Productivity and Allocative Efficiency in Manufacturing in Georgia



Source: Geostat and World Bank staff estimates.

Figure 7: Productivity over the Lifecycle: Georgia



Source: Geostat 2007/2008 SME Survey combined with Enterprise Survey (2008).

Business environment data for Georgia suggests that allocative efficiency and lifecycle productivity may be constrained by the complexity of closing a business, high borrowing costs, and inadequate pricing for end-user electricity tariffs. Notwithstanding Georgia's widely acclaimed performance in improving its business

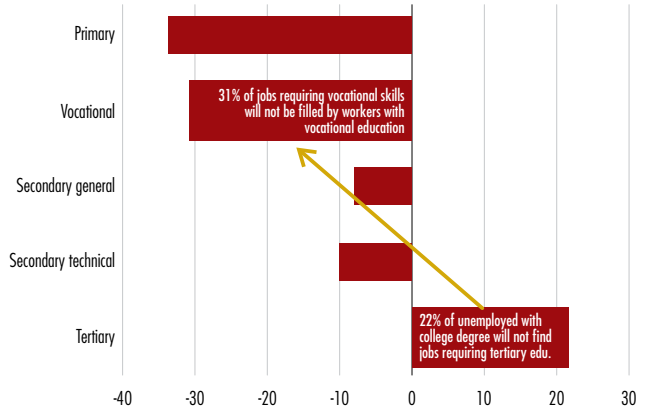
environment since 2004, the data indicates that firms continue to experience a range of constraints to improved productivity and allocative efficiency. A number of these constraints appear to be particularly binding. Specifically, the Doing Business publication indicates that progress in improving the ease of closing a business remains elusive. Furthermore, Georgian firms' self-reported obstacles in the World Bank BEEPS data point toward high borrowing costs and electricity as leading constraints. Specific measures that can have an effect on reducing high borrowing costs and lari spreads include further lowering NPLs, inducing bank entry and competition, taming inflationary expectations, and generally improving confidence in the banking sector and the local currency. On electricity, while Georgia has overall made impressive improvements in the reliability of its electricity supply, there is room to improve the pricing mechanism of end-user tariffs through more transparent and independent regulation to support a move toward more cost-based pricing.

Better education and skills are also needed

The evidence from Georgia suggests productivity growth is constrained by inadequate use of labor resources. Georgia has a large pool of labor that is either unemployed or employed in low productivity activities in the rural sectors. Many of these workers have a tertiary education. In fact, Georgia is one of the countries with the highest share of unemployed workers with tertiary education (39 percent) compared to 20 percent in Armenia, 10 percent in Bulgaria, and 14 percent in Turkey. On the other hand, firms report that they are unable to find workers with necessary technical and vocational skills. The evidence indicates that 33 percent of jobs requiring vocational skills will not be filled by workers with vocational education. If workers could be equipped with the necessary vocational skills and be moved from less productive activities into more productive jobs, this could be source of sustained productivity growth over time.

Figure 8: Labor Supply and Shortage by Education, 2010

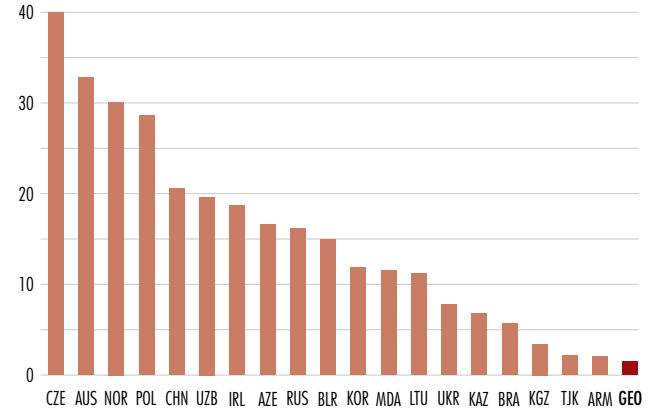
in percent, if new jobs require the same education as existing jobs



Source: KILM and EdStat.

Figure 9: Share of students in VET tracks in secondary education, 2010

in percent



Source: UNESCO Institute for Statistics and EdStats.

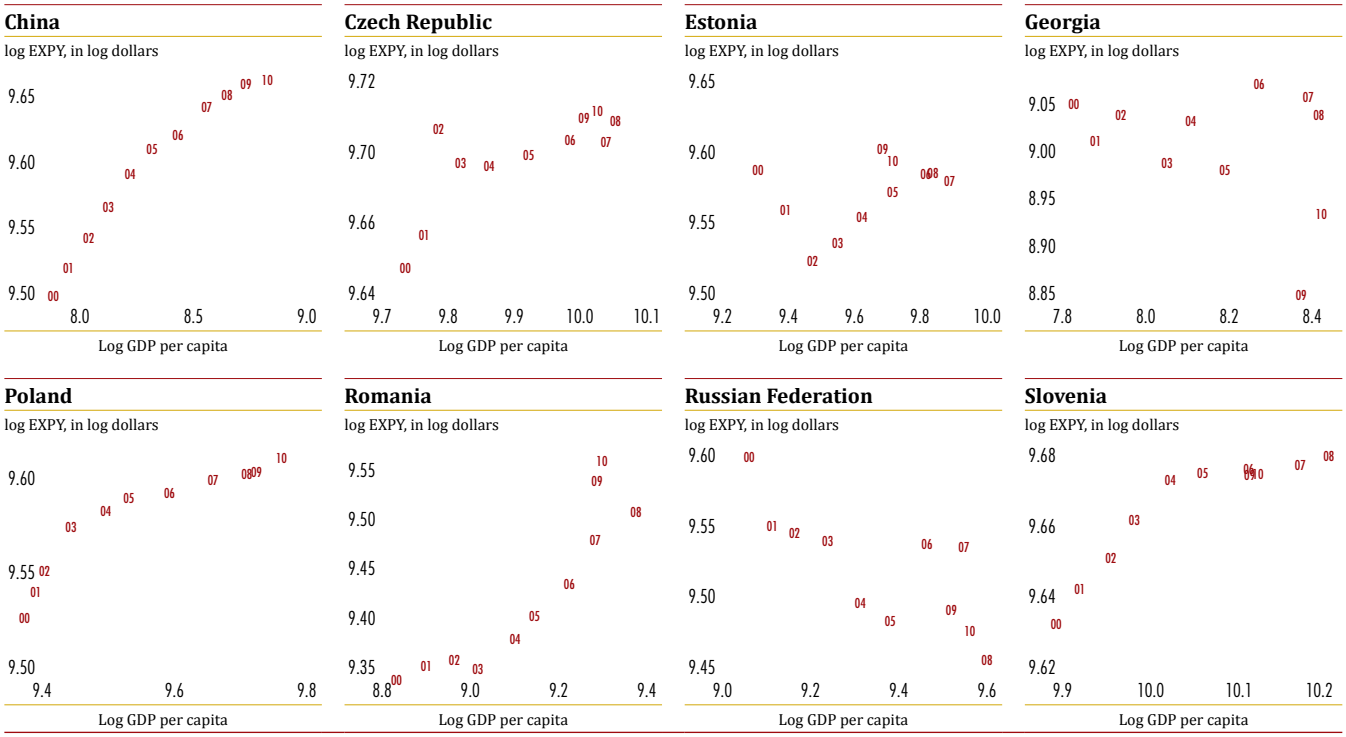
The evidence from Georgia points to the need for vocational training and job matching services to better deploy labor resources in Georgia. A look at the share of secondary students in vocational tracks across countries indicates that vocational education is seriously underprovided in Georgia. The share is close to 40 percent in the Czech Republic, 20 percent in China, 12 percent in Korea and Moldova, but less than 3 percent in Georgia. Reforms in the education sector in Georgia are, therefore, needed to better equip workers with the skills demanded by jobs

in today's marketplace. These reforms should also focus on the overall quality of education, as PISA scores indicate that the share of functional illiteracy in Georgia is over 60 percent. In addition to education sector reforms, labor market initiatives such as job matching services can also help to some extent in better allocating workers in the economy.

Exports need better price competitiveness, market access, and logistics infrastructure

The lack of participation of exports and tradables in the growth and productivity boom in Georgia since 2004 is a serious source of concern regarding the sustainability of those trends. Although growth in Georgia during the last decade has generally been faster than the average for developing Asia and non-oil ECA countries, the export share of GDP in Georgia has been much smaller. The commodity structure of Georgia's exports has also not changed much over the last decade, with resource-based products such as metals and minerals still dominant, while employment-generating processed products remain secondary. Unlike economies in Central and Eastern Europe, Georgia has not yet demonstrated success in tapping into vertically integrated international production networks. The quality and sophistication of its export basket has also not evolved much over the last decade and the survival probability of Georgia's entry into new export markets is considerably below that of other countries in the ECA region.

Figure 10: Export Sophistication and per capita GDP 2000–2010



Source: World Bank staff estimates.

A number of trade-related policy areas are likely constraining improved productivity and growth of exports and tradables in particular. First, the real exchange rate has appreciated considerably in recent years. While this is not in itself a problem, to the extent that the relative productivity of tradables does not keep pace

with real exchange rate appreciation, it can lead to the loss of competitiveness of exports and tradables in general. Second, while Georgia has made much progress in improving its trade, logistics, and internal infrastructure in recent years, considerable progress lies ahead to reach the levels of top performers among middle income countries. Third, Georgia is still in the process of implementing trade-related reforms as part of its DCFTA (Deep and Comprehensive Free Trade Agreement) negotiations with the European Commission and there is adequate evidence to indicate that these reforms could facilitate exports to European and international markets. Since Georgia does not have substantial natural resources, a large domestic market, or a location contiguous with a large external market, progress along these trade-related policy areas can be particularly important in developing its export and tradable sectors.

Addressing sector-specific constraints can also support exports and employment generation

Studies of the apparel and wine sectors provide specific insight into reforms that can support higher productivity and growth in these key tradable sectors. Two sectors that have demonstrated the potential to expand exports at different levels in Georgia include wine and labor-intensive apparel. While wine has historically been Georgia's dominant agricultural export, apparel is an incipient sector that is only beginning to demonstrate success in connecting to international production networks. In addition to exports, both of these export sectors also have the potential to significantly boost employment generation in Georgia.

The policies that emerge from the sector studies resonate with the cross-cutting policies identified in the other parts of this report. For example, in both the apparel sector and in the wine sector, the sector studies suggest that there is an important need for provision of vocational education that closely tracks the needs of the sector. In apparel, this can take the form of training for sewing staff, mechanics, and quality assurance staff. In the wine sector, this can take the form of training for viticulturists, winemakers, and wine marketers. Another genre of policies to emerge from both sector studies is support for collective investment promotion and marketing. In the apparel sector, this can take the form of attracting more investment from parent firms in Turkey. In the wine sector, this can take the form of attracting investment to upgrade wineries and vineyards so that they are ready for higher quality export production.

Structure of Report

The rest of this synthesis report is in five chapters. Chapter 1 looks at the sources and prospects for growth, the record on national savings, and the prospects for raising savings. Chapter 2 is a diagnostic of the dynamics of firm-level productivity growth and the policies that may be constraining improved allocative efficiency and lifecycle productivity. Chapter 3 looks at employment and skills to assess whether Georgia's labor resources are adequately deployed. Chapter 4 is a diagnostic of exports and international trade and the policies that may be holding back growth and productivity of the export and tradable sectors in particular. Two appendices on the apparel and wine industries provide additional insight into policies to support export growth.

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CHAPTER 1. GROWTH AND SAVINGS

1.1. Introduction

Growth in Georgia during 2004–12 averaged 6 percent per year, but sustaining such a growth rate over the next 5–15 years will prove challenging and require coupling rapid productivity growth with sustained high levels of investment. Although progress in Georgia has been considerable over the last decade, it still remains among the lowest income countries in the ECA region and still below its 1990 level of real GDP. Sustaining growth at least above 5 percent per year for an extended period is thus important in raising living standards toward those in the EU-10 countries. While the record of growth in Georgia has been strong in recent years, its sustainability is a source of concern because of several reasons. First, growth during 2004–12 has largely been powered by services, construction, and nontradables in general. While manufacturing has also played a role, manufactured exports have not expanded substantially as a share of GDP during this period. Second, growth during 2004–12 has primarily been driven by the type of rapid total factor productivity (TFP) growth that accompanies the onset of sustained growth in transition economies. Over time, such high rates of TFP growth prove difficult to sustain. Third, a large part of investment since 2004 has been financed by foreign direct investment (FDI) inflows, which remain depressed since the crisis. In this context, the national saving rate also remains low, which poses a challenge in sustaining the necessary rate of investment going forward.

Raising national savings to adequate levels will prove challenging because of growing public current expenditure obligations and because of inadequate incentives for private savings. National savings fell sharply in Georgia during 2004–09 because of several reasons. First, overly optimistic expectations led to unsustainably high consumption by households and dividends by firms. Second, the rapid growth of credit from the financial sector fueled the unsustainable growth of consumption and low corporate savings. Third, the countercyclical fiscal stimulus eroded public savings during the crisis of 2008–09. Although national savings has recovered during 2010–12, estimates suggest that it remains below levels that would be necessary to sustain GDP growth over 5 percent per year going forward. Raising public savings will prove challenging as the authorities have taken on an expansion of social protection and health programs that will entail considerable growth in current expenditures. Furthermore, while retirement savings should be a prime motivation for private saving given Georgia's demography, incentives for private retirement saving remain poorly developed.

In order to address the challenge of sustaining strong growth in the medium term, this chapter discusses the following investment, productivity, and savings requirements:

- Sustain GDP growth of at least 5 percent per year during 2013–17 by combining investment of more than 30 percent of GDP with TFP growth of more than 3 percent per year.

- Raise national savings to 27 percent of GDP by 2017 and 29 percent by 2027 in order to sustain growth above 5 percent per year over the next 15 years.

In order to address the challenge of raising national savings, this chapter discusses the following options for consideration:

- Shift the medium term fiscal framework to one with lower growth of current expenditures and where expenditure consolidation (as a share of GDP) during 2013–15 comes from both current and capital expenditures rather than relying more than 1-for-1 on capital expenditure consolidation.

- Improve the incentives for private retirement savings by setting expectations for growth the basic pension benefit at sustainable levels, introducing an opt-out supplementary savings scheme, and developing capital markets to widen availability of financial instruments for long term saving.

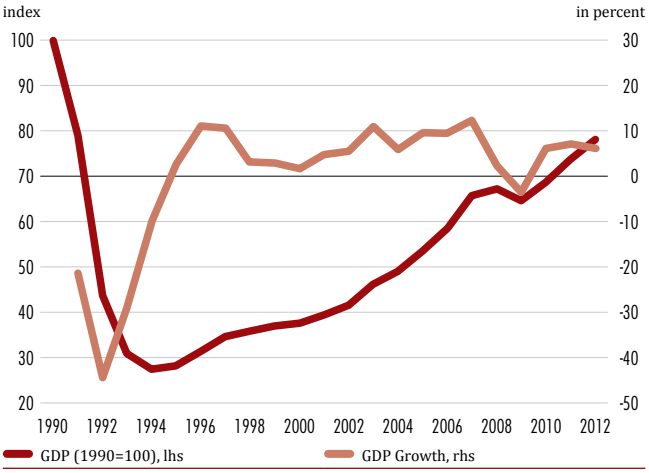
- Put in place macroprudential regulation, such as capital and liquidity requirements, asset concentration or credit growth limits, and loan eligibility criteria, to curb unsustainable credit-fueled consumption booms in the future

The structure of this chapter is as follows. The second section looks at the sources of growth in Georgia, with a specific focus on the period 2004–12. The third section considers the prospects for growth over the next five years 2013–17. The fourth section looks at the record of savings in Georgia and its impact on growth during the next 15 years. The fifth section analyzes why savings fell so precipitously during 2004–09. The final section considers the options to raise national savings going forward.

1.2. Sources of Growth

Growth in Georgia over the last twenty years has been characterized by four phases: collapse, stabilization, acceleration, and finally, crisis and rebound. Following the breakup of the former Soviet Union, Georgia experienced one of the sharpest contractions in output among transition economies. By 1995, real GDP collapsed to a mere 28% of its 1990 level, as widespread economic disorder and civil conflict took hold (figure 1.1). From 1996, a brief period of macroeconomic stability and intermittent structural reforms enabled the economy to rebound and stabilize from highly depressed levels. Growth averaged 5.2 percent during 1999–2003, although GDP was still at only 46% of its 1990 level in 2003. Following the Rose Revolution at end-2003, far-

Figure 1.1: GDP Growth and Trajectory

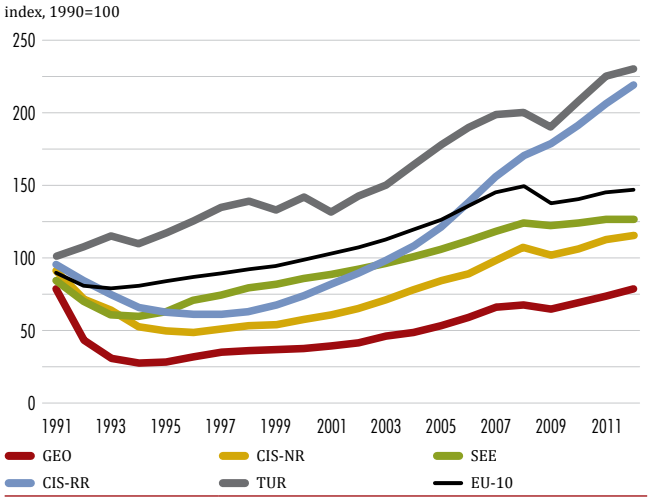


Source: Georgian authorities and WB staff estimates.

reaching and broad-based reforms led to an acceleration of growth to an average rate of 9.3 percent during 2004–07. This acceleration was halted by the twin shocks of the August 2008 conflict and the global financial crisis. The economy rebounded strongly in 2010–12, with growth averaging 6.5 during this period.

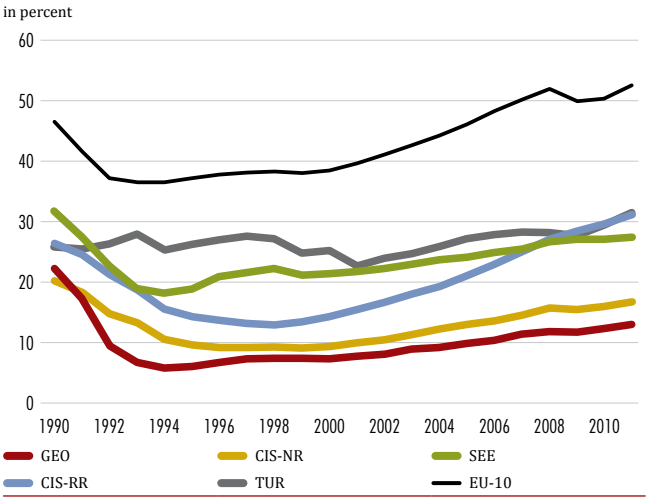
Notwithstanding the strong growth record since 2003, real GDP in 2012 was still at only 78 percent of its 1990 level and per-capita GDP was significantly below the EU 10 average. Georgia is one of the very few ECA countries that have not yet caught up to its 1990 real GDP level (figure 1.2). Non-resource rich CIS countries as a group reached 115 percent of their 1990 real GDP level in 2012, while the EU-10 and Southeastern Europe reached 147 percent and 127 percent, respectively. Only two non-resource rich CIS countries (Ukraine and Moldova at 70 and 62 percent, respectively) plus Serbia (at 69 percent) were farther behind their 1990 real GDP levels than Georgia. The level of per-capita GDP in Georgia also remains among the lowest in the ECA region (figure 1.3). In 2011, the level of per-capita GDP in Georgia was at 77 percent of the average level of non-resource rich CIS countries, 41 percent of Turkey, 25 percent of the EU-10 countries, and 13 percent of industrial countries. All this suggests that sustained, rapid growth through catch-up is both possible and necessary to further raise living standards in Georgia.[2]

Figure 1.2: Real GDP, Georgia and ECA Countries



Source: Georgian authorities and WB staff estimates.

Figure 1.3: Share of Industrial GDP per capita



Source: Georgian authorities and WB staff estimates.

Services, construction, and manufacturing played significant roles in driving growth in Georgia during 2004–07, while agriculture stagnated. Services have been the largest part of the economy by far, accounting for more than 67 percent of GDP in 2012. This, coupled with significant growth rates within key service sectors, has meant that services have played the dominant role in driving growth in Georgia. Large capital inflows into mostly the nontradable sectors during 2004–07 reinforced this pattern of growth. During 2004–07, out of an overall growth rate of 9.3 percent, services accounted for 6.1 percent, of which trade, hotels and restaurants accounted

2 This report makes use of a range of different comparator countries and country groups to benchmark Georgia. The EU-10 (i.e. the ten Central and Eastern European countries that joined that EU in the 2000s) are treated as aspirational for Georgia. The non-resource rich CIS countries (CIS-NR) are more similar to Georgia with regard to income levels and background, while the resource rich CIS countries (CIS-RR) have benefited from the resource boom of recent years and often face different development drivers and challenges. The Southeastern European (SEE) countries are those of the Western Balkans. The report also occasionally makes use of different individual or other country group comparators when this is called for by the needs of the specific issues being analyzed or by data availability.

for 2.1 percent and transport and communications accounted for 1.7 percent (table 1.1). Manufacturing grew at a robust rate, albeit from a small base, and thus accounted for 1.5 percent, while construction accounted for 1.3 percent. Agriculture contracted during this period and thus made a negative contribution to growth.

After the broad-based contraction of 2008–09, manufacturing and services have led the strong rebound during 2010–12. The contraction of 2008–09 was broad-based and included agriculture as well as those sectors which contributed most to growth during 2004–07 (trade, hotels, transport, construction, and manufacturing). Agriculture contracted by 5.5 percent per year during 2008–09, while manufacturing contracted by 5 percent, construction by 7 percent, and transport by 4.5 percent. The rebound of 2010–12 has been led by services and manufacturing, while agriculture has continued to stagnate. Some revival of exports, as well as strong growth of tourism and transport services helped to reinforce this pattern of growth during the rebound. Out of an overall growth rate of 6.5 percent during 2010–12, services accounted for 4.5 percent (of which trade and hotels accounted for 1.6 percent and transport accounted for 1 percent) and manufacturing accounted for 1.4 percent. Going forward, given the importance of developing the tradable sectors, manufacturing and agriculture will need to play an increasingly important role in driving growth. Services will have to continue to play an important role, particularly those services such as tourism and transport that contribute to receipts from exports of services.

Table 1.1: Sectoral Decomposition of Growth

in percent

	Sectoral Share of GDP					Sectoral Contributions to Growth			
	1997	**2003**	**2007**	**2009**	**2012**	**1998-03**	**2004-07**	**2008-09**	**2010-12**
Agriculture	29.2	20.6	10.7	9.4	8.4	0.19	-0.33	-0.51	-0.02
Manufacturing	10.7	9.3	9.6	8.1	10.5	0.31	1.46	-0.41	1.41
Product Processing by HHs	5.4	4.6	3.2	3.4	2.8	0.06	0.48	-0.09	0.00
Mining and Energy	3.7	5.0	3.8	3.9	3.8	0.28	0.23	0.22	0.08
Construction	3.8	6.8	7.8	6.5	7.3	0.76	1.29	-0.48	0.55
Services	47.1	53.8	65.0	68.7	67.2	3.21	6.13	0.49	4.49
Of which:									
Trade, Hotel, & Restaurant Svcs	13.9	17.2	17.2	17.3	19.1	1.25	2.09	-0.41	1.64
Transport and Comm Svcs	8.2	14.8	12.1	11.2	10.6	1.30	1.72	-0.15	1.02
Financial Services	1.0	1.6	2.5	2.9	2.8	0.36	0.47	0.06	0.54
Real Estate and Rental Svcs	9.7	6.4	6.5	7.5	8.7	0.30	0.62	0.04	0.46
Public Administration Svcs	4.0	3.8	14.9	15.8	11.2	-0.02	0.16	0.69	0.40
Educ, Health, and Social Svcs	6.7	7.8	8.5	11.4	10.9	0.11	0.77	0.60	0.25
Other Services	3.7	2.3	3.3	2.6	3.8	-0.09	0.30	-0.33	0.18
Total GDP	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**4.82**	**9.27**	**-0.78**	**6.51**

Source: Georgian authorities and WB staff estimates.

Consumption accounted for the largest and growing share of GDP on the demand side through 2009, although the role of consumption has been scaled back during the post-crisis rebound of 2010–12. The share of GDP spent on consumption increased from 81.4 percent in 2003 to 92.2 percent in 2007, primarily due to rapidly growing government consumption. With investment constant around 32 percent of GDP, the large negative net exports figure widened even further from -14.6 percent in 2003 to -26.7 percent in 2007. This suggests that the pattern of growth in Georgia even before the financial crisis appeared unsustainable. Indeed, as the crisis made clear, the sharp decline in FDI and other capital inflows led to sharp contractions in investment, imports,

and growth, with the result that the negative net exports figure narrowed somewhat to -19 percent in 2009. The consumption share increased further during the crisis to 105.7 percent of GDP in 2009 as households faced with falling incomes sought to smooth their consumption. On the other hand, the rebound during 2010–12 has been based on a pickup in investment while consumption has adjusted, declining to 88.3 percent of GDP by 2012. Further reorientation from consumption to investment will be important to ensure sustained, rapid growth in the medium term.

Table 1.2: Structure and Growth Rates of Aggregate Demand

in percent

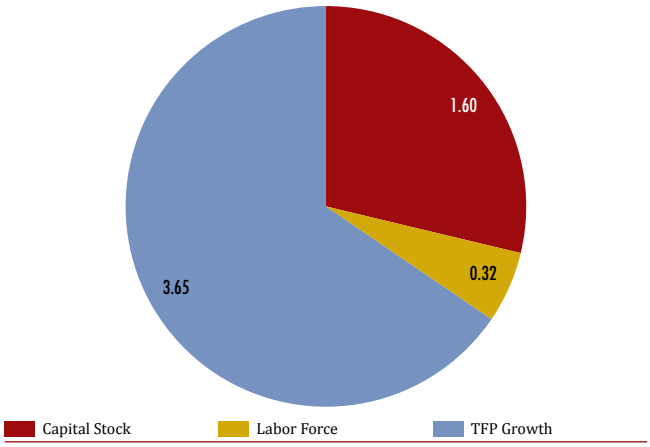
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
				Share of GDP						
HH Consumption	71.6	72.8	66.4	78.3	70.3	76.4	81.2	74.3	73.5	71.6
Govt Consumption	9.8	14.0	17.3	15.3	21.9	25.9	24.5	21.1	18.2	17.7
Gross Capital Formation	31.3	31.9	33.5	30.9	32.1	26.0	13.0	21.6	26.2	29.0
Net Exports	-14.6	-16.6	-17.8	-24.2	-26.7	-29.8	-19.2	-17.8	-18.5	-19.3
				Growth Rate						
HH Consumption		7.6	0.1	29.0	0.9	11.2	2.2	-2.7	5.9	3.4
Govt Consumption		52.2	35.3	-3.1	60.2	21.0	-9.0	-8.5	-7.4	3.3
Gross Capital Formation		7.8	15.0	0.8	16.7	-17.1	-51.7	76.1	29.9	17.6
Net Exports		-20.7	-17.5	-48.3	-24.4	-13.9	38.0	1.4	-11.5	-10.8

Source: Georgian authorities and WB staff estimates.

Growth to date in Georgia has primarily been driven by productivity improvements, with the contribution of capital accumulation playing a secondary role. During 1999–2003, out of the overall growth rate of 5 percent, TFP growth accounted for 3.6 percent while capital accumulation accounted for 1.5 percent (figure 1.4–1.5). The acceleration of growth during 2004–2007 was primarily a result of higher TFP growth: out of an overall growth of 9 percent during this period, TFP growth accounted for 6.3 percent while the contribution of capital accumulation

Figure 1.4: Overall Contributions of Capital, Labor, and TFP to Growth, 1999–12

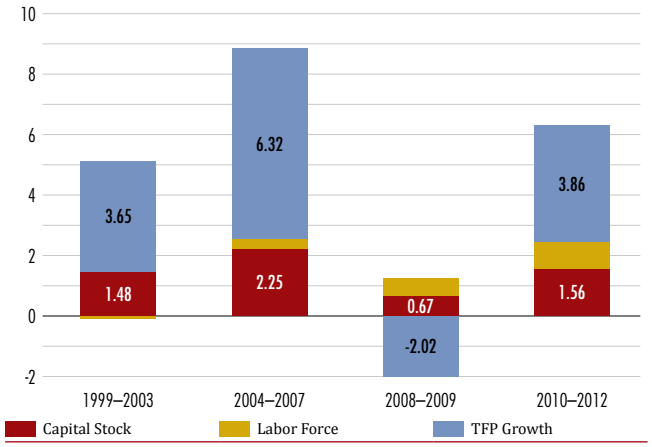
in percent



Source: Georgian authorities and WB staff estimates.

Figure 1.5: Contributions of Capital, Labor, and TFP to Growth during sub periods

in percent



Source: Georgian authorities and WB staff estimates.

accounted for 2.3 percent.[3] During both periods, with the labor force essentially remaining flat, the contribution of labor was marginal. Finally, as the economy rebounded from the global financial crisis in 2010–12, productivity again played the dominant role in the recovery. Out of an overall growth of 6.5 percent during this period, TFP growth accounted for 3.7 percent and capital accounted for 1.6 percent. The dominant role of productivity in driving growth is common among transition economies due to large efficiency improvements from substantial reorganization and reallocation in the economies. Furthermore, unlike other emerging parts of the world, many ECA countries have a flat or declining labor force, which further elevates the role of productivity in driving growth. Going forward, capital accumulation will need to play an increasingly important role over time, although sustaining rapid growth will require both higher investment as well as robust rates of productivity growth.

1.3. Prospects for Growth

The prospects for sustaining moderate to rapid growth in Georgia going forward will require combining high levels of productivity growth with high levels of investment. Using a simple neoclassical production function, growth can be decomposed into the contributions of capital accumulation, labor force growth, and total factor productivity growth.[4] The burden on investment and productivity growth are particularly high in Georgia given that its labor force is projected to decline gently going forward due to demographic factors. The labor force is projected to decline by 0.3 percent per year during 2013–17 and by about 0.65 percent per year during 2018–27. A number of scenarios of investment and TFP growth rates required to generate given GDP growth rates are shown in table 1.3. In order to generate a growth rate of 5 percent per year during 2013–2017, with investment at 20 percent of GDP, the TFP growth rate necessary is 4.2 percent per year. Such a TFP growth rate is very high by international standards for a sustained period of time. If investment rises to 30 percent of GDP, the necessary TFP growth rate is still a formidable 3.1 percent. In order to generate an even higher GDP growth of 7 percent during 2013–17, with investment at 20 percent of GDP, TFP growth will have to average a remarkably high 6 percent. If the investment rate rises to 35 percent of GDP, the necessary TFP growth rate necessary is still a very high 4.4 percent.

Table 1.3: Georgia: Growth Scenarios for 2013–17

in percent

Growth	Investment (%GDP)	TFP Growth
5.0	20	4.2
5.0	25	3.6
5.0	30	3.1
5.0	35	2.6
7.0	20	6.0
7.0	25	5.5
7.0	30	4.9
7.0	35	4.4

Source: Georgian authorities and WB staff estimates.

3 TFP calculations for shorter time periods can be influenced by demand side factors (e.g. consumption booms). What this means is that part of the TFP movements could, in fact, have to do with shifts in capacity utilization, rather than trends in the creation of new capacity. A recent study of productivity growth in the ECA region found that for countries where available data allowed capital stock to be adjusted for capacity utilization, the magnitudes of the TFP movements were attenuated but the overall trends remained intact.

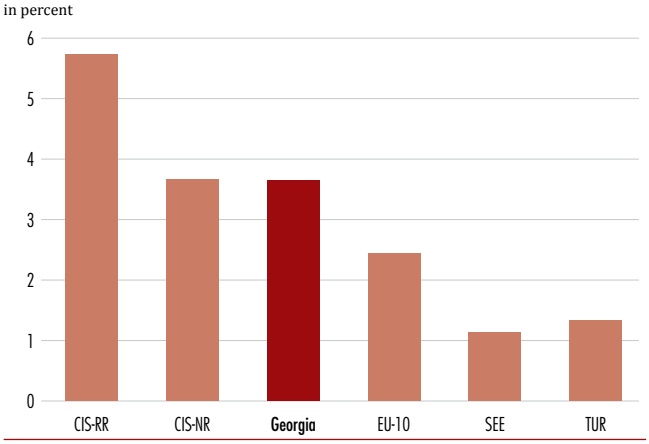
4 A simple Cobb-Douglas production function and the growth decomposition are shown below. The rate of capital accumulation is given by the ratio of the investment rate to the capital output ratio.

$Y = AK^{\alpha} L^{1-\alpha}$

$\Delta Y/Y = \alpha(\Delta K/K) + \{(1-\alpha)\, \Delta L/L\} + \Delta A/A = \alpha\, \{(I/Y)/(K/Y)\} + \{(1-\alpha)\, \Delta L/L\} + \Delta A/A$

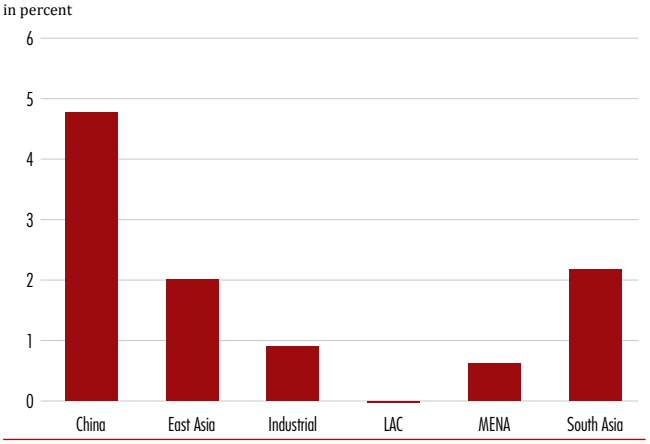
This production function can also be augmented to include human capital, although the most appropriate measure of human capital is subject to debate. For the simple production function, productivity improvements resulting from higher levels of embodied human capital will show up as TFP growth.

Figure 1.6: TFP Growth: Georgia and ECA Comparators, Avg. Annual 1999–2012



Source: Georgian authorities and WB staff estimates.

Figure 1.7: TFP Growth: Global Comparators Avg. Annual, 1999–2005



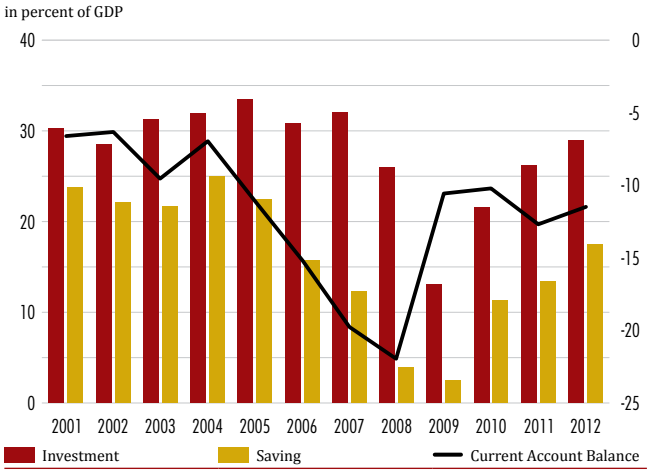
Source: Georgian authorities and WB staff estimates.

Although Georgia and other ECA countries have experienced TFP growth rates of 4–5 percent in the past, this will prove difficult to sustain for long periods of time. The figures below show that over the extended period 1999–2012, Georgia and the non-resource rich CIS countries have generated average TFP growth rates of about 3.7 percent per year. During this period, the average annual TFP growth rate was 2.5 percent for EU-10 countries and 1.3 percent for Turkey. Estimates for global comparators show that in other growing emerging economies, TFP growth rates of around 2–3 percent have been more common. While productivity growth rates in the ECA region have been higher during the initial years of sustained post-transition growth, this is primarily due to the large efficiency gains associated with post-transition reorganization. As transition matures, such low-hanging sources of productivity gains are gradually exhausted. Generating productivity improvements from other sources in order to sustain rapid growth will, therefore, be a key challenge facing Georgia. Chapter 3 takes a deeper look at this challenge by exploring the firm-level drivers of productivity.

1.4. Savings Record and Growth Impact

The low saving rate in Georgia is a key impediment to sustaining adequate investment and rapid economic growth. As shown in the previous section, in addition to high TFP growth, sustaining rapid economic growth in Georgia will require high investment rates of 30–35 percent of GDP or more. In order to achieve such investment rates without resorting to an unsustainably large current account deficit, it is critical to maintain an adequate national saving rate. At the same time, it will be important to attract FDI to ensure a stable source of financing for a more sustainable savings investment gap. During the growth acceleration of 2004–07, the overall investment rate in Georgia was fairly steady at about 32 percent of GDP (figure 1.8). However, national savings fell sharply from an average of 23.7 percent of GDP during 2004–05 to 12.3 percent in 2007, thus generating a wide external current account deficit of 20 percent of GDP in 2007. This was temporarily financed by large inflows of foreign direct investment and other capital inflows but turned out to be unsustainable as the inflows dried up following the financial crisis of 2008–09. The overall investment rate collapsed to 13 percent of GDP in 2009 and national savings fell further to a low of 2.5 percent of GDP in 2009. As the economy has recovered, investment and savings

Figure 1.8: Investment, Saving, and Current Account

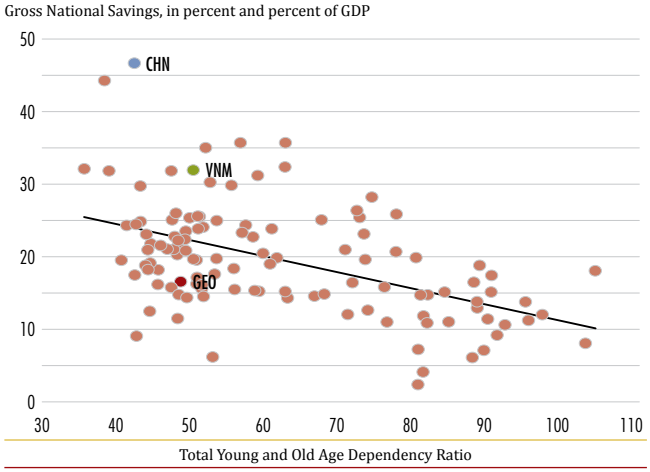


Source: Georgian authorities and WB staff estimates.

recovered to 26 percent and 13 percent of GDP, respectively, in 2011, but both remain below pre-crisis levels.

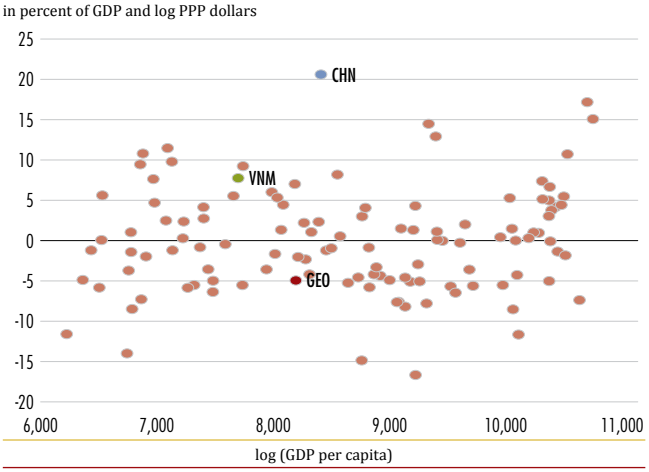
The saving rate in Georgia during 1999–2011 has been significantly below that of countries with similar age dependency ratios and income levels. Among the most significant structural determinants of national saving rates are old and young age dependency ratios.[5] Since household saving rates vary systematically over the life cycle of the household head, countries with high young and old age dependency ratios generally have a lower saving rate. The average saving rate in Georgia during 1999–2011 was 16.5 percent of GDP. Figure 1.9 plots the average saving rate for 117 non-resource rich countries during 1999–2011 against the total old and young age dependency ratio during this period. The figure shows that Georgia saves significantly less than countries with a similar age dependency ratio. A reduced form equation of savings on old and young age dependency ratios is estimated using the cross section of 117 non-resource rich countries.[6] Figure 1.10 plots the residual of actual national savings from its fitted value against per capita GDP. The fitted value of national savings for Georgia is 21.5 percent of GDP, which is the average saving rate for a country with Georgia's old and young age dependency ratios. Georgia's actual saving rate of 16.5 percent of GDP was thus 5 percentage points less than what would be predicted by the model. Other countries at similar income levels saved significantly more than what is predicted by the model.

Figure 1.9: Cross-country variation in saving rates and age dependency ratios, 1999–11



Source: Georgian authorities and WB staff estimates.

Figure 1.10: Residual of GNS from fitted value, using old and young dependency ratios, 1999–11



Source: Georgian authorities and WB staff estimates.

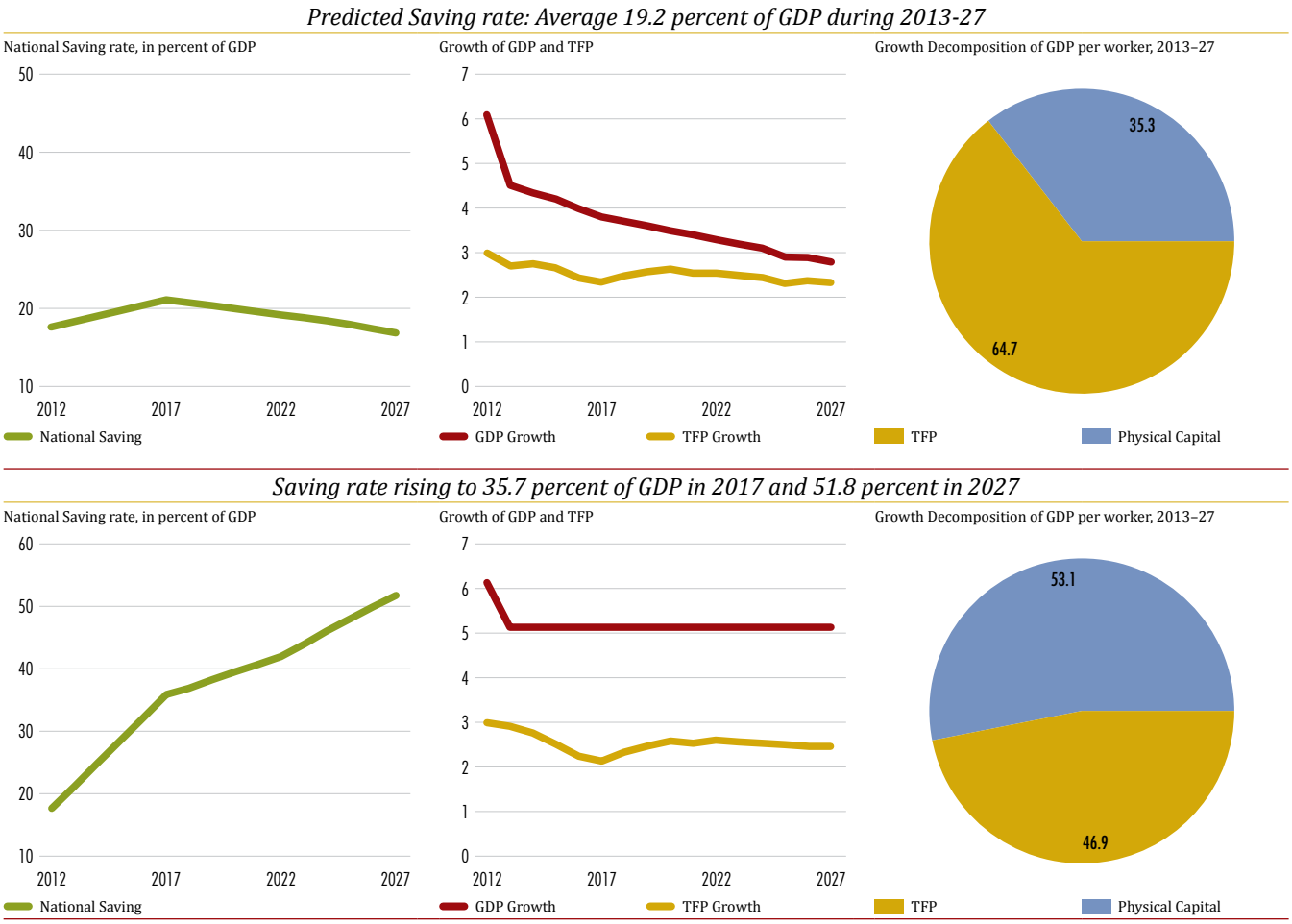
5 The young age dependency ratio is the ratio of the population under 15 years of age to the population of working age 15–64. The old age dependency ratio is the ratio of the population 65 years of age and over to the population of working age 15–64.

6 This is a simplified but updated version of the Loayza et. al (2000) reduced form estimation and is found to explain about 30 percent of the cross-country variation in saving rates during 1999–2011. The coefficients on both the old and young age dependency ratios are statistically significant.

Given the low saving rate in Georgia, a key question for policy makers is what saving rate is necessary to generate a target GDP growth path. The answer to this question is that it depends critically on the TFP growth rate, as well as the labor force growth rate and the sustainable level of the current account deficit. In order to inform policymakers, a number of possible savings and growth paths are simulated for two separate TFP growth scenarios: a baseline scenario with TFP growth of 2.5 percent during 2013–27; and a reform scenario with TFP growth of 3.5 percent during 2013–27. The sustainable path of the current account deficit is projected to decline from 11.5 percent of GDP in 2012 to 6.5 percent in 2017 and 4.5 percent by 2022. The labor force projections are from the ILO, which are based on projected demographic shifts in Georgia. For each TFP growth scenario, two sets of simulations are performed. The first set considers the implications of savings rising from 17.5 percent of GDP in 2012 to the rate predicted (21 percent) by old and young age dependency ratios by 2017 and following the predicted path thereafter (19 percent in 2022 and 17 percent in 2027). The second set considers the necessary savings path to sustain GDP growth above 5 percent during 2013–27.

Under the baseline scenario of 2.5 percent TFP growth and savings rising to the predicted path, GDP growth falls to 3.8 percent by 2017 and 2.8 percent by 2027. The saving rate averages about 20 percent of GDP over 2013–27 under the predicted saving rate. The investment rate averages about 25 percent of GDP during

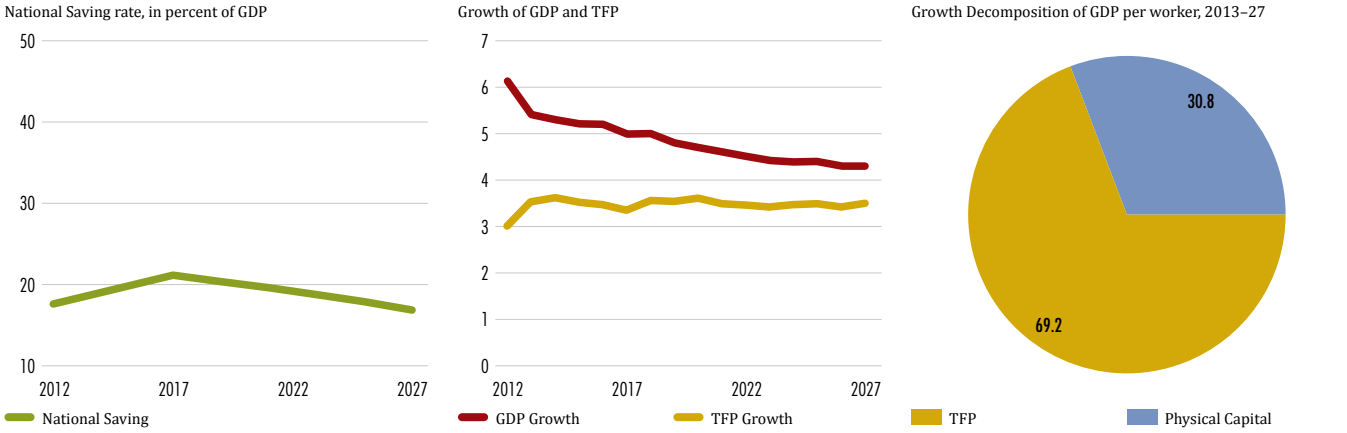
Figure 1.11: Baseline Scenario with TFP Growth Rate 2.5 percent during 2013–27



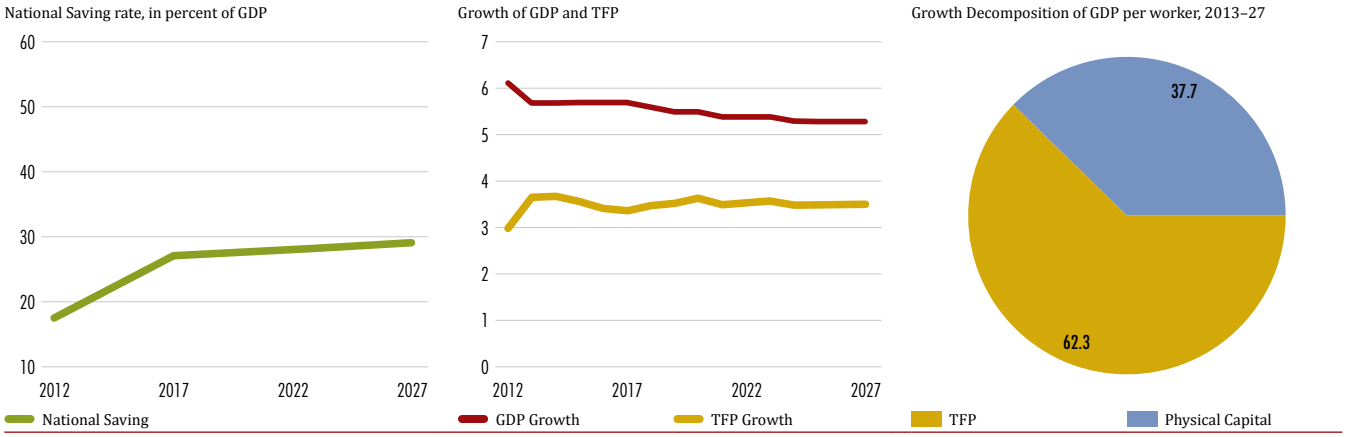
Source: Bank staff estimates.

Figure 1.12: Reform Scenario with TFP Growth Rate 3.5 percent during 2013–27

Predicted Saving rate: Average 19.2 percent of GDP during 2013–27



Saving rate rising to 27 percent of GDP in 2017 and 29 percent in 2027



Source: Bank staff estimates.

this period, falling from 29 percent in 2012 to 27.5 percent in 2017 and 21.5 percent by 2027. In this scenario, the GDP growth rate averages 4.1 percent during 2013–17, 3.4 percent during 2018–22, and 2.9 percent during 2023–27. Clearly, therefore, under the baseline 2.5 percent TFP growth scenario, even with the saving rate rising to the predicted path, GDP growth falls rapidly to subpar levels.

In order to sustain GDP growth of 5 percent under the baseline 2.5 percent TFP growth scenario, the saving rate would need to rise remarkably to 35.7 percent of GDP by 2017 and further to an astounding 52 percent of GDP by 2027. The investment rate would rise to 42 percent of GDP by 2017 and 56.3 percent by 2027. In this case, the growth decomposition shows that 53 percent of the growth of GDP per worker would come from the contribution of capital accumulation while only 47 percent would come from TFP growth. Such trajectories of savings and investment are unrealistic as they would require sharp compression of consumption and living standards in Georgia over the next 15 years. The key message here is that it is unrealistic to expect to sustain GDP growth of 5 percent in Georgia with a TFP growth rate of 2.5 percent over the next 15 years.

Under a reform scenario of 3.5 percent TFP growth and with savings rising to the predicted path, GDP growth averages 5.2 percent during 2013–17 and falls to 4.3 percent by 2027. While generating the higher

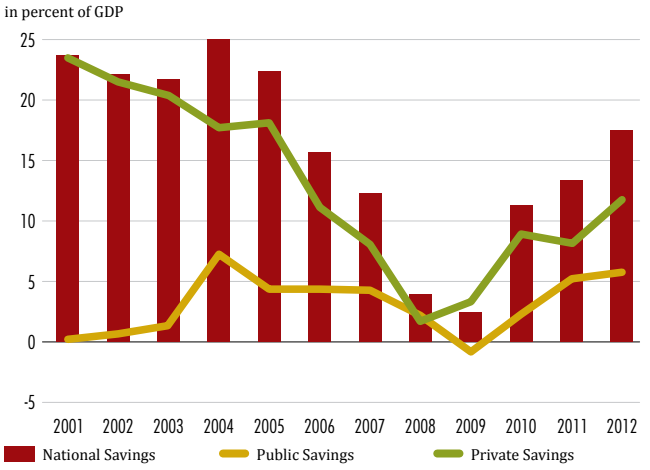
TFP growth rate of 3.5 percent is an ambitious proposition, it alone is not sufficient to sustain GDP growth above 5 percent for an extended period. In order to achieve this target, the national saving rate would need to rise progressively over time. If the national saving rate rises to 27 percent of GDP by 2017 and further to 29 percent by 2027, GDP growth averages 5.7 percent during 2013–17, 5.5 percent during 2018–22, and 5.3 percent during 2023–27. In this case, the growth decomposition shows that 38 percent of the growth of GDP per worker would come from the contribution of capital accumulation while 62 percent would come from TFP growth. The key message is that sustaining 5 percent GDP growth in Georgia over an extended period will require ambitious reforms to generate rapid TFP growth, coupled with a considerable increase in the national saving rate. The rest of this chapter considers the challenge of raising the low rates of national savings in Georgia.

FDI will continue to remain important to ensure a stable source of financing for a more sustainable savings investment gap. Although the saving rate will need to rise in Georgia, the scenarios discussed above will require continued external financing of the current account deficit, which is projected to decline to more sustainable levels gradually, from 11.5 percent of GDP in 2012 to 6.5 percent in 2017 and 4.5 percent by 2022. FDI can serve as a more stable source of financing for the current account deficit. In this context, the recent decline in FDI and increased reliance on shorter term inflows for external financing is a matter of concern. FDI declined from 6 percent of GDP in 2010–11 to 3.8 percent in 2012. Going forward, it will be important to attract FDI in the tradable sectors not only to ensure a more stable source of external financing, but also transfer knowledge and improve productivity in the tradable sectors.

1.5. Explaining Low Savings

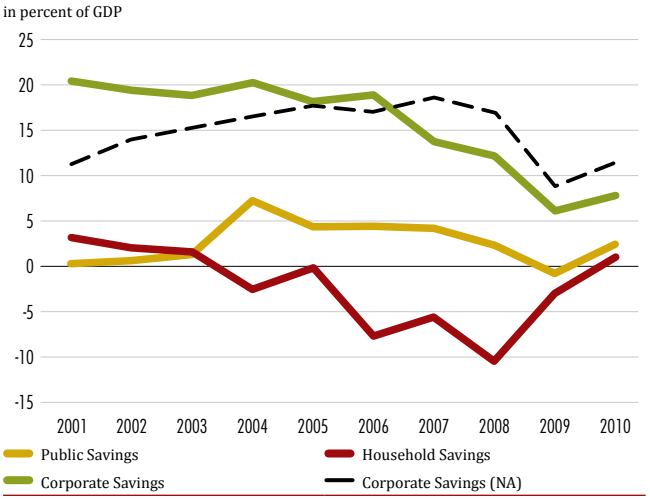
In analyzing why savings in Georgia fell so precipitously during 2004–09, it is important to consider how saving by different economic agents behaved during this period. While figures on national, public, and private savings are relatively reliable (figure 1.13), the further breakdown of private savings into corporate and

Figure 1.13: National, Private, and Public Savings



Source: Georgian authorities and WB staff estimates.

Figure 1.14: Corp, Household, and Public Savings



Source: Georgian authorities and WB staff estimates.

household savings is a challenging task that involves the use of multiple sources of data (figure 1.14). The multiple data sources used include a detailed breakdown of national accounts data, data from the Revenue Service to estimate corporate profits and dividends, the annual household budget surveys, enterprise surveys, and data from the National Bank of Georgia.

A large part of the sharp decline in national savings took place in the pre crisis period 2004–07 when private savings fell considerably. National Savings was in the range of 22–25 percent of GDP during 2001–04, but then fell sharply to 12.3 percent in 2007. The decline in national savings during 2005–07 was primarily due to the decline in private savings from 18 percent of GDP in 2005 to 8 percent in 2007. Public savings held steady in the pre crisis period at about 4.3 percent of GDP during 2005–07. In fact, public savings actually increased in the first half of the 2000s, rising from 0.7 percent of GDP during 2001–03 to 4.3 percent during 2005–07, thus helping to mitigate some of the decline in private savings that had begun in the first half of the 2000s.

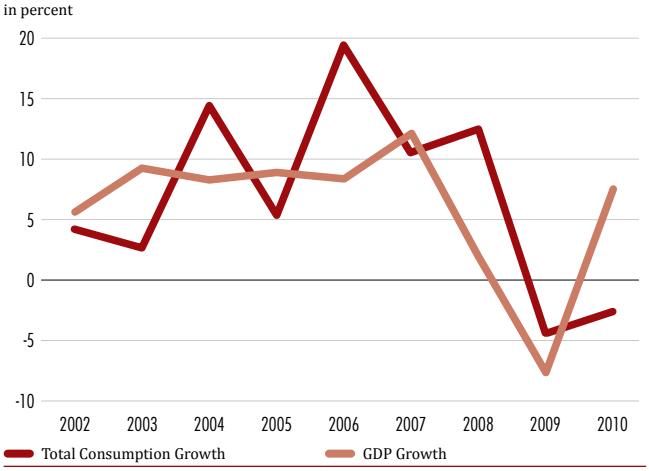
During the crisis of 2008–09, national savings fell further due to a decline of both public and private savings, although these crisis-related declines appear to have been reversed in 2010–12. National savings fell further from 12.3 percent of GDP in 2007 to an all-time low of 2.5 percent in 2009, but then rebounded to 13.4 percent by 2011. The crisis-related decline during 2008–09 was due to a decline of both private and public savings during this period. Private savings fell from 8.1 percent of GDP in 2007 to 3.3 percent in 2009 and then rebounded to 8.2 percent in 2011. Public savings declined from 4.2 percent of GDP in 2007 to -0.8 percent in 2009, but rebounded to 5.3 percent by 2011. Public savings, therefore, contributed along with private savings to the decline in national savings during the crisis.

Both household and corporate savings contributed to the sharp decline in private savings 2004–09. Household saving (as a share of GDP) declined slowly during the early 2000s from 3 percent in 2001 to 0 percent in 2005, but then it decreased quite abruptly to the range of -5 and -10 percent in the period 2006–09. It bounced back to 0 percent in 2010, but it is undeniable that the decline in national saving after 2005 is at least in part due to the behavior of household saving. Corporate saving (as a share of GDP) increased slightly during the first half of the 2000s, but remained fairly steady at about 18–20 percent of GDP during 2001–06.[7] Thereafter, it declined considerably, reaching a low of 6 percent of GDP in 2009, the low point of national saving in recent years. Following the crisis, corporate savings appears to have reversed part of its decline by rebounding to 9 percent of GDP in 2010.

The first explanation for the sharp decline in national saving is the increased optimism after 2004 about future growth prospects. Regime change and reforms following the Rose Revolution brought about expectations of higher sustained economic growth for the future. If income growth is high and expected to remain so in the future, consumption growth would increase and surpass income (output) growth. This seems to have been the case in the mid-2000s in Georgia (figure 1.15). GDP growth accelerated to more than 9 percent per year during 2004–07, while consumption growth was even higher, averaging close to 15 percent per year in the same period (and peaking at 20 percent in 2006). This naturally implies a savings contraction. Furthermore, when current income growth declines but expectations about future growth remain high, current consumption growth is likely to stay high, leading to a further reduction in saving, which seems to have been the case with the further decline in

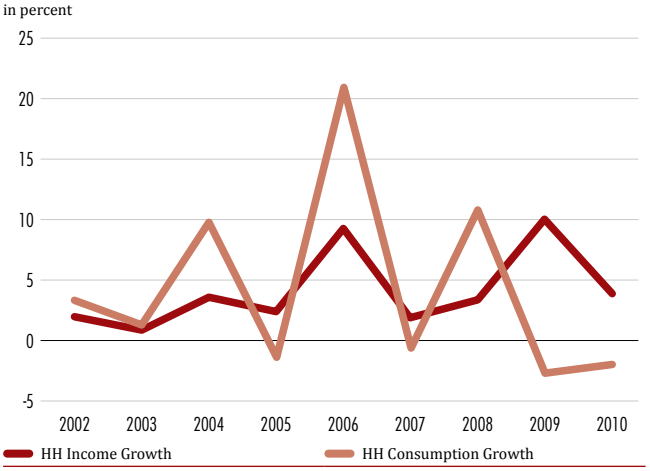
7 The corporate savings trend during 2001–06 differs slightly depending on which data source is used, but generally it either increased to the 18–20 percent of GDP range or remained in that range during this period.

Figure 1.15: Total Consumption and Income Growth



Source: Georgian authorities and WB staff estimates.

Figure 1.16: Household Income and Consumption Growth

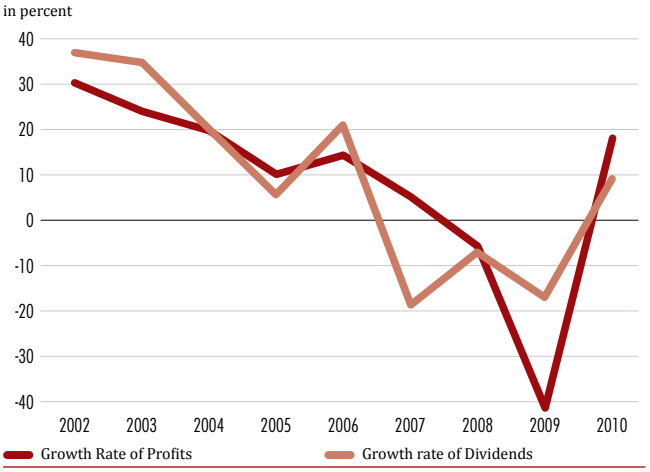


Source: Georgian authorities and WB staff estimates.

savings in Georgia following the shocks of 2008–09. Finally, if expectations for future growth decline, consumption growth adjusts downward, so that savings rises, which is consistent with the signs of a savings rebound in Georgia during 2010–12.

Household income and consumption behavior are broadly in line with the observations just made about aggregate income and consumption growth. Household consumption growth surpassed household income growth for most of the 2000s, and especially when the latter appeared quite strong, in 2004 and especially 2006 (figure 1.16). This is the period of declining household saving rates. Thereafter, in 2009–10, household consumption growth contracted quite sharply, as households realized that their future income prospects were not as promising as originally expected. This is when household savings recovered.

Figure 1.17: Corporate Profits and Dividend Growth

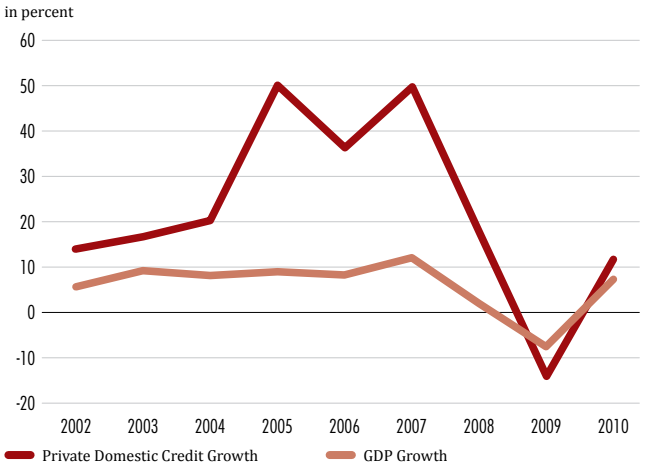


Source: Georgian authorities and WB staff estimates.

The saving behavior of corporations during the 2000s is consistent with the view that low saving resulted from overly optimistic expectations. At the beginning of the decade, the growth rate of corporate profits was quite large, averaging just over 20 percent per year for 2001 04 (figure 1.17). However, the growth rate of dividends (or distributed earnings to corporate owners) was even larger, averaging almost 25 percent for the same period. In the latter part of the decade, as it became clear that the high profit growth rates could not be maintained, dividends declined sharply. In 2006, dividends still grew at a stronger rate than profits (contributing to the decline of corporate saving in that year); but in 2007, dividends took its largest adjustment downwards. In the next couple of years (and especially in 2009), the dismal behavior of corporate profits was largely responsible for the decline in corporate saving, with signs of recovery only at the end of the decade.

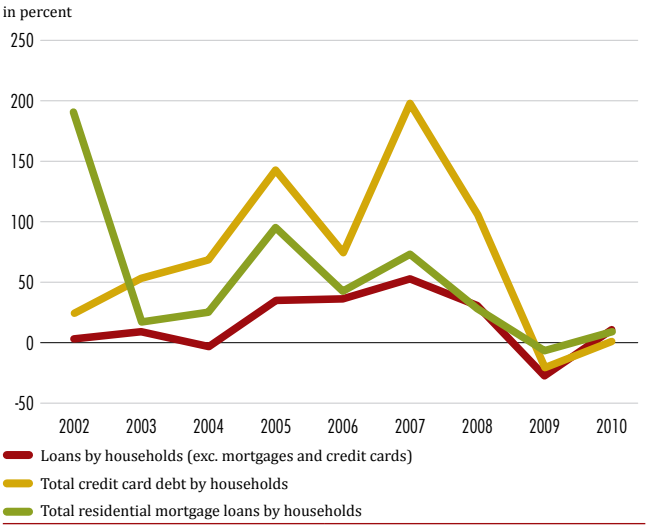
The second explanation for the sharp decline in private saving is the sudden and abundant availability of private domestic credit. In fact this explanation is closely linked to the first one because optimism for future income growth can lead to high consumption growth only when financial constraints are relaxed and domestic credit becomes widely available. The evidence is quite clear regarding the enormous expansion of private domestic credit (figure 1.18). Its growth rate surpassed by far the already high growth rate of GDP, especially towards the middle of the decade, where the sharpest decline in household and corporate saving rates took place. In 2004, the growth rate of private domestic growth rate was twice as high as that of GDP; and in the years 2005–07, while still GDP growth was around 10 percent per year, the growth rate of private domestic credit was 4–5 times higher.

Figure 1.18: Private Domestic Credit Growth and GDP Growth



Source: Georgian authorities and WB staff estimates.

Figure 1.19: Growth of Household Credit



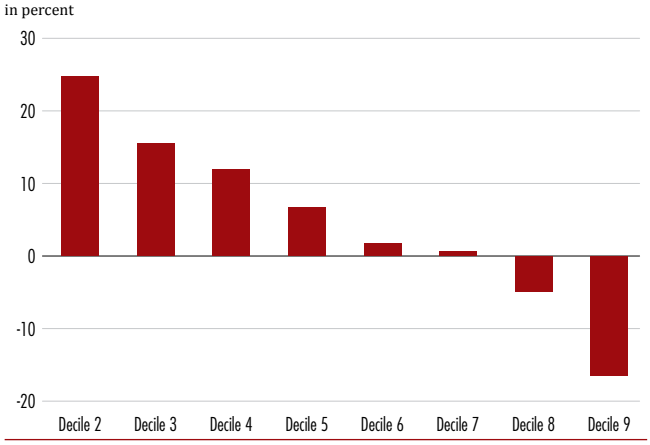
Source: Georgian authorities and WB staff estimates.

The abundance of domestic credit was clearly shared by the household sector. Between 2001 and 2008, domestic credit to households expanded almost ten-fold. Credit card and residential mortgage loans were virtually non-existent in 2001, and household credit consisted of traditional commercial bank loans. By the end of the decade, in contrast, credit card debt and mortgage loans became, respectively, 12 percent and 30 percent of total household debt. Residential mortgage loans expanded quite rapidly at the beginning of the 2000s and in the middle of the decade, reaching a growth rate of 100 percent in 2005. Credit card debt expanded at large and often rising growth rates up to 2009, with annual growth rates between 75–200 percent during 2005–08. To the extent that the expansion of household credit is not matched by a rise in household assets, credit growth has a direct negative impact on household saving. Even when there is an increase in household assets (as in the case of mortgage financing for residential housing), credit availability has a negative adjustment effect on private saving because households do not need to save fully before purchasing, for instance, a house or a consumer durable. In this respect, the negative impact on saving is likely to be temporary as debts reach their sustainable levels.

A look at savings behavior disaggregated by household characteristics is consistent with the view that higher credit availability facilitated lower saving rates. Household savings behavior is analyzed by income level and by age of household head. The findings appear to be puzzling at first. First, during 2007–10 in Georgia, the richer the household, the lower its saving rate, with households in the 8th and higher deciles of the income/

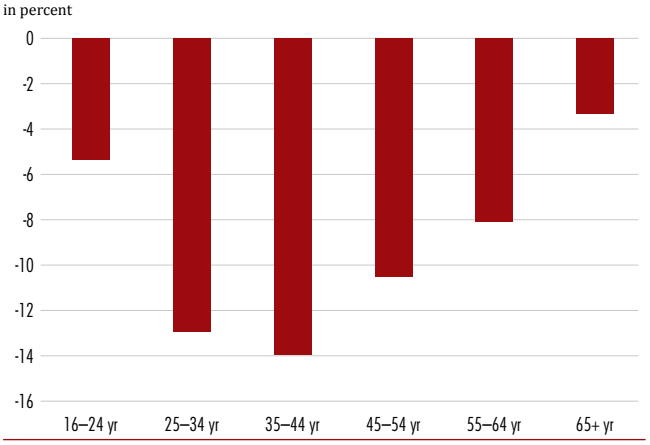
consumption distribution showing negative saving rates (figure 1.20). This suggests that recent years have been a period of adjustment by Georgian households, with higher credit availability and accumulated assets enjoyed by richer households allowing them to maintain high consumption levels during an economic downturn. Second, the theoretical literature and international evidence indicate that, during normal times, households whose head is of prime working age save more than either young- or old-aged households. The opposite seems to have been the case for Georgian households during 2007 10 (figure 1.21). Again this is likely to have been the case because households in prime working age have easier access to credit, which allowed them to continue a high consumption level in the midst of a recession.

Figure 1.20: Household Saving rate by Income Decile, Avg. 2007–10



Source: Georgian authorities and WB staff estimates.

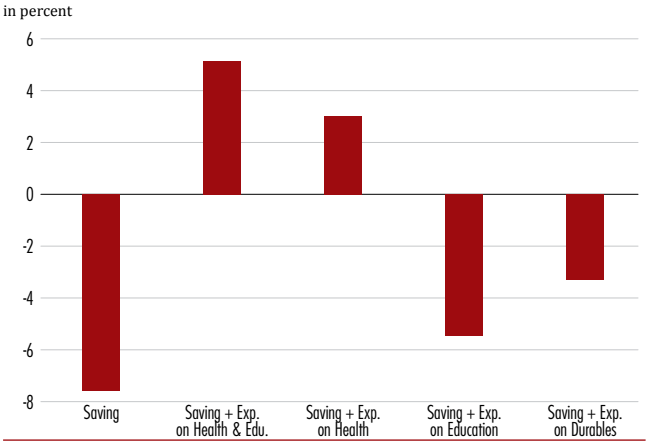
Figure 1.21: Household Saving rate by HH Head Age, Avg. 2007–10



Source: Georgian authorities and WB staff estimates.

Household expenditures on health, education, and durables contributed to dissaving by households. A popular misperception in Georgia is that household saving is low because households apply their savings toward real estate purchases and education expenditures. It is worth noting that real estate purchases are not counted as consumption, so that they would still show up as household savings. Spending on education, health, and durables do, however, count as consumption and thus reduce saving. The data indicates that large out-of-pocket health spending has a particularly large impact on reducing household saving. Without health spending, average household savings during 2007–10 would have risen from -7.6 percent to 3 percent. Taking out education spending adds another 2 percent to saving, while taking out spending on durables adds about another 4.2 percent.

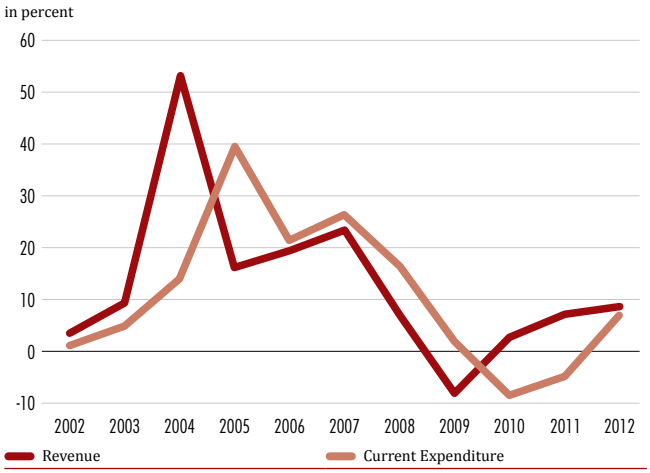
Figure 1.22: Household Saving Rate and Spending on Health, Education, and Durables, Avg. 2007–10



Source: Georgian authorities and WB staff estimates.

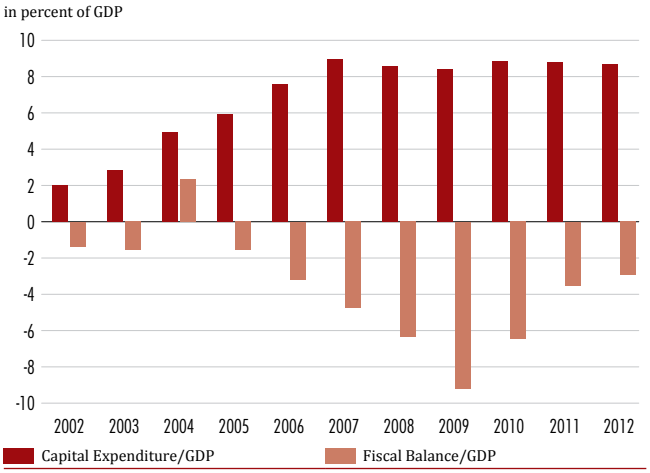
The third explanation for the decline in national savings is the decline in public savings after 2007 with the implementation of countercyclical fiscal policies. As previously described, public saving declined after 2007, after rising from 0.7 percent of GDP during 2001–03 to 4.3 percent during 2005–07. The expansion of public savings during the mid-2000s was achieved by keeping growth of current expenditures below or in line with the growth of revenues, although both expanded quite vigorously with annual growth rates ranging from 10–50 percent during 2004–07 (figure 1.23). Thereafter, as current expenditure growth exceeded revenue growth during the countercyclical fiscal stimulus during 2008–09, public savings declined. As the economy recovered and current expenditure growth was reined in during 2010–11, public savings recovered.

Figure 1.23: Growth of Revenue and Current Expenditure



Source: Georgian authorities and WB staff estimates.

Figure 1.24: Fiscal Balance and Capital Expenditure



Source: Georgian authorities and WB staff estimates.

A disaggregation of public saving into the sum of the fiscal balance and capital expenditure is illustrative. Between 2003 and 2007, the fiscal balance declined from -1.5 percent of GDP to -4.7 percent, but this decline was more than exceeded by the growth of capital expenditure from 2.8 percent of GDP to 9 percent. Thus, public savings increased during this period. During 2008–09, capital expenditures remained high, but the fiscal balance declined further to -9.2 percent of GDP in 2009, so that public savings fell. During 2010–12, as capital expenditures remained high but the fiscal balance improved, public savings recovered. Going forward, in order to preserve or expand public savings, any consolidation of capital expenditures should be matched or exceeded by a corresponding improvement in the overall fiscal balance.

1.6. Savings Prospects

Raising national savings from 17.5 percent of GDP in 2012 to around 27 percent by 2017 will require raising both public and private savings from current levels. As discussed in section 1.4, sustaining GDP growth above 5 percent per year will require coupling rapid TFP growth with a rise in the national saving rate to 27 percent of GDP by 2017 and 29 percent by 2027. Even though both public and private savings have recovered rapidly during 2010–12, it would be difficult for either to alone increase by a further 10 percentage points of GDP

by 2017. The high old age dependency ratio and its further projected rise is an impediment to raising private savings. In addition, the current fiscal framework places the burden of further fiscal consolidation on capital expenditures and has a rising path of current expenditures, thus presenting an impediment to raising public savings.

Raising public savings will require a shift in the fiscal framework to control the growth of current expenditures going forward. The authorities have begun to implement a considerable expansion of social protection and health expenditures, such that the medium term fiscal framework actually projects an increase in current expenditures from 23 percent of GDP in 2012 to 24 percent by 2015. The fiscal deficit, on the other hand, is projected to decline from 3 percent of GDP in 2012 to 2 percent by 2015 primarily through a reduction of capital expenditures from 8.7 percent of GDP in 2012 to 6 percent in 2015. As a result, the burden of expenditure consolidation falls more than 1-for-1 on capital expenditures and public savings is actually projected to decline from 5.7 percent of GDP in 2012 to 4 percent in 2015. Raising public savings will require a shift in the fiscal framework toward one where current and capital expenditures make at least similar contributions to expenditure consolidation going forward. Table 1.4 presents such an alternative. This shift in the fiscal framework would obviously have implications for the government's expansion of social protection and health programs and require delaying its roll out over time. Even with such an alternative, public savings would rise to only 6.2 percent of GDP by 2017, so that most of the burden of raising national savings over the next five years would still fall on private savings. To the extent that the necessary increase in private savings is difficult to achieve, public savings would need to rise even more through even more rapid consolidation of current expenditures. It is worth noting that the alternative fiscal paths have the advantage of a more gentle consolidation of capital expenditures, thus providing space for important public investments to support medium to long run economic growth.

Table 1.4: Savings and the Fiscal Framework

in percent of GDP

	Current Macro-Fiscal Framework			Alternative Macro-Fiscal Framework		
	2012e	**2015p**	**2017p**	**2012e**	**2015p**	**2017p**
Revenues	28.8	27.9	28.2	28.8	27.9	28.2
Current Expenditure	23.1	23.9	23.7	23.1	22.1	22.0
Capital Expenditure	8.7	5.9	5.9	8.7	7.7	7.6
Overall Fiscal Balance	-2.9	-1.9	-1.4	-2.9	-1.9	-1.4
Public Savings	5.7	4.1	4.5	5.7	5.8	6.2
Private Savings	11.8	14.4	15.3	11.8	16.0	18.0
Gross National Savings	17.5	18.5	19.9	17.5	21.8	24.2

Source: Georgian authorities and WB staff estimates.

One of the requirements in ensuring a more stable path of private savings behavior is implementing macroprudential regulation to curb unsustainable credit-fueled consumption booms in the future. As described in this chapter, one of the reasons for the sharp decline in private savings in Georgia was the unsustainable credit-fueled consumption boom during 2005–07. Preventing a recurrence of such episodes will help ensure the stability of private savings in the future. Recent work on evaluating policies used to deal with such episodes points to the effectiveness of macroprudential regulation. Monetary policy, while a natural instrument to control credit growth, is often ineffective in smaller emerging economies because of ineffective transmission channels, high dollarization, and capital inflows that reverse the intended effects. Fiscal policy is in principle a useful tool for controlling an overheating economy, but often proves ineffective because of policy lags and political

economy considerations so that there is limited evidence of the success of fiscal policy in limiting credit booms or their likelihood of ending in a bust. Macroprudential regulation can offer a more targeted approach to ensuring stability and sustainability of credit growth and avoid some of the high costs on economic activity from more blunt monetary and fiscal policies.

Specific macroprudential policies that have demonstrated success in limiting unsustainable credit booms include capital and liquidity requirements, asset concentration or credit growth limits, and loan eligibility criteria. Countercyclical capital requirements and dynamic loan-loss provisioning rules increase the cost of bank capital during boom years and build up capital buffers during boom years to absorb losses during bad years. Asset concentration and credit growth limits intended to reduce the exposure of bank portfolios to sectoral shocks and, improve average loan quality. Managing loan eligibility criteria, such as by raising loan-to-value (LTV) and debt-to-income (DTI) limits, are intended to raise the average quality of borrowers, and such measures have been credited with reducing housing market speculation in Korea and keeping default rates on mortgages low in Poland. While Georgia has begun putting in place some elements of such macroprudential policies, it will need to actively manage their countercyclical nature should another unsustainable credit-fueled consumption boom unfold in the future.

Pension reform is a multifaceted subject that requires critical attention in order to improve private saving prospects (as well as public saving prospects) in Georgia. The high and rising old age population means that savings for retirement should be an important structural motivation for private saving in Georgia. At present, most households in Georgia rely primarily on the publicly funded basic pension benefit for old-age income. This is deleterious to national savings on two counts. First, since the public benefit is paid out of general revenues, it creates a large stream of current expenditure liabilities that erode public saving prospects. Second, if households expect that the pension benefit would be periodically increased to maintain its replacement rate (as a share of the average wage in the economy), this would serve as a disincentive to private saving for retirement. Indeed, while the basic benefit in Georgia is not indexed, it has periodically been raised to maintain its replacement rate. Simulations presented in the recently completed Public Expenditure Review for Georgia indicate that a large one-time increase in the pension benefit followed by subsequent increases to maintain the higher replacement rate would increase pension costs from the current 3.5 percent of GDP to 7 percent in the medium term. This would have a formidable negative structural impact on both public and private savings in Georgia.

A key pension reform option to improve saving prospects would combine limited growth of the basic pension benefit with a mechanism to encourage voluntary savings for retirement. Growth of the basic pension benefit could be limited in several ways, such as indexing it to inflation to maintain a basic level of purchasing power for all elderly and selectively targeting additional benefit increases to a subset of the elderly that are below certain thresholds of impoverishment. This would help to set expectations for the future replacement rate at sustainable levels and encourage individuals to save during their working years to cover the difference between the basic benefit and their desired replacement rate.

While the need for a supplementary pension system is clear, a number of important design issues will need to be addressed. These include whether the new vehicle is mandatory or voluntary, where to invest the funds and the readiness of supervisory authorities to oversee investments, the tax treatment of pension savings, and so on. A mandatory second pillar is likely premature for Georgia at present because it would require greater supervision and availability of financing instruments, while potentially enhancing incentives for informality in the

economy. A key option to enhance participation in a voluntary retirement scheme is to have automatic enrollment with the option of opting out, rather than have individuals explicitly opting in. The international evidence indicates that participation in opt-out systems can approach 85–95 percent while that in opt-in systems can be between 40–70 percent.

An important area that requires attention in voluntary pension schemes is the availability of sound long term investment instruments and capital markets development more generally. The lack of long term investment instruments is particularly acute in Georgia, and current pension funds earn low returns. This lack of financial development may in turn be due to an insufficient pool of long term savings, thus suggesting a chicken and egg problem. The lack of long term savings may reflect a low level of trust in domestic financial markets. Addressing this will require an extended period of financial stability, but it will also require efforts to identify sound instruments for long term retirement savings in Georgia.

1.7. Conclusion: the way forward

The analysis in this chapter indicates that growth and savings prospects can evolve along one of several paths in Georgia depending on the choices that are made. On the one hand is the path of unstable and declining economic growth over the next 15 years as national savings remains low and investment remains subject to the whims of an uncertain global economic environment and regional tensions. With a baseline productivity growth of 2.5 percent per year and national savings remaining at current levels of about 17 percent of GDP, growth would fall to under 4 percent per year by 2017 and under 3 percent per year by 2027. Along this path, public savings would be constrained by rapid growth of current expenditures as untargeted social protection and health programs are scaled up. Private savings would remain low and volatile, as saving for retirement remains limited and consumption patterns fluctuate depending on the whims of financial markets. On the other hand is the path of sustained and rapid economic growth over the next 15 years as rapid productivity growth is combined with higher national savings to ensure a sustainable source of financing for the necessary high investment. Along this path, with productivity growth of 3.5 percent per year, an increase in national savings to 27 percent by 2017 enables the economy to sustain growth above 5 percent per year over the next 15 years. Along this path, the fiscal framework shifts to rein in growth of current expenditures so that public savings and investment are not crowded out. Macroprudential regulations curb unsustainable consumption booms and an array of reforms is launched to improve the incentives for private retirement savings. Along this path, living standards in Georgia improve at a brisk pace toward those of upper middle income countries and poverty and unemployment decline over time.

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CHAPTER 2. FIRM LEVEL PRODUCTIVITY

2.1. Introduction

Sustaining the necessary rapid productivity growth in Georgia will require unleashing the process of creative destruction that has remained stagnant in the manufacturing sector. Productivity growth has been strong in Georgia since 2004 but as shown in the previous chapter, TFP growth will need to be sustained at a rate of 3.5 percent or more going forward. This will prove challenging in an environment where the initial low hanging sources of productivity gains from the reforms since 2004 have been exhausted. It will require identifying new sources of productivity growth. Evidence to date in Georgia suggests that the tradable manufacturing sector has not yet begun to serve as a driving force behind productivity gains and growth as in other international episodes of rapid economic progress. This points to the importance of developing a deeper understanding of the patterns, drivers, and impediments to firm level productivity growth in the manufacturing sector in Georgia. As the main silos of economic activity, firms represent the avenue through which productivity improvements can be achieved, so that exploring the drivers and constraints of firm level productivity can provide important policy insight. Firm level analysis allows the bottom-up exploration of the scale, sectoral, regional, and time varying dimensions of productivity growth.

This chapter combines data from the national enterprise survey, business environment and investment climate surveys from the World Bank and IFC, and trade data to understand the drivers and constraints to productivity growth in Georgia. The main source of enterprise data is a comprehensive survey of firms in Georgia between 2001 and 2010, comprising of 63,328 firm-years. The World Bank's Enterprise Surveys for Georgia from 2002, 2005, and 2008 provide an additional source of firm-level balance sheet information as well as the constraints faced by firms. In addition, a supplementary small and medium enterprise (SME) survey conducted in 2007 and 2008 covers firm constraints for a much larger sample than the Enterprise Surveys. The World Bank's Doing Business indicators are also used for measures of regulatory performance. Trade data from UN Comtrade and firm level data for comparator countries from the Amadeus database are also used. The multi-faceted and breath of the data facilitates an in-depth analysis of productivity across many dimensions, including allocative efficiency, firm size dynamics, firm lifecycle growth, regional productivity differences and export performance, as well as the leading constraints to productivity growth. The firm-level data is large and covers ten years, however the coverage is not universal and therefore little can be said about the entry and exit dynamics of firms in Georgia.

In order to address the challenge of sustaining rapid productivity growth in the manufacturing sector, the analysis in this chapter discusses the following options for consideration:

- Create environment for improved allocative efficiency and productivity growth over the firm lifecycle in manufacturing by addressing constraints in the areas of ease of closing a business, high borrowing costs, and electricity tariffs.

- Improve the ease of closing a business, as productive resources are otherwise stuck in unproductive uses, thereby hampering productivity growth.

- Reduce high borrowing costs for firms and high lari bank spreads through a range of possible avenues including further lowering NPLs, inducing bank entry and improving bank competition, taming inflationary expectations, and generally improving confidence in the banking sector and the local currency.

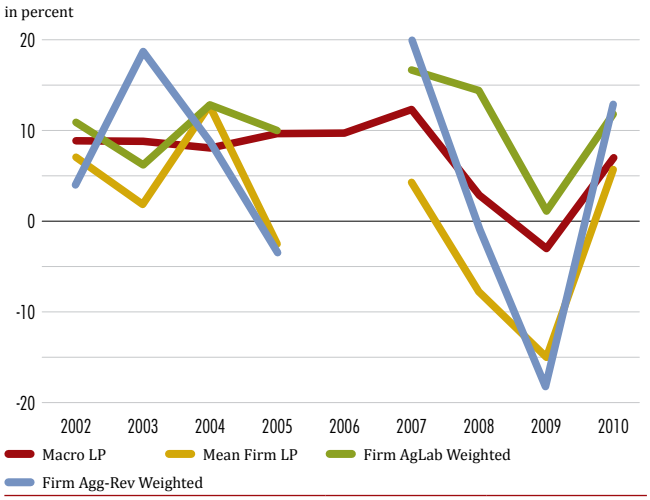
- Improve the mechanism of electricity pricing through more transparent and independent regulation to move toward cost-based pricing and lower spreads between retail and wholesale tariffs.

The structure of this chapter is as follows. The second section undertakes an in-depth exploration of the patterns, sources, and drivers of manufacturing productivity at the firm level in Georgia. Section 3 identifies the potential constraints to productivity growth at the firm level. Section 4 considers in greater detail the validity of the constraints to firm productivity growth and the avenues to addressing them.

2.2. Productivity Dynamics and Patterns

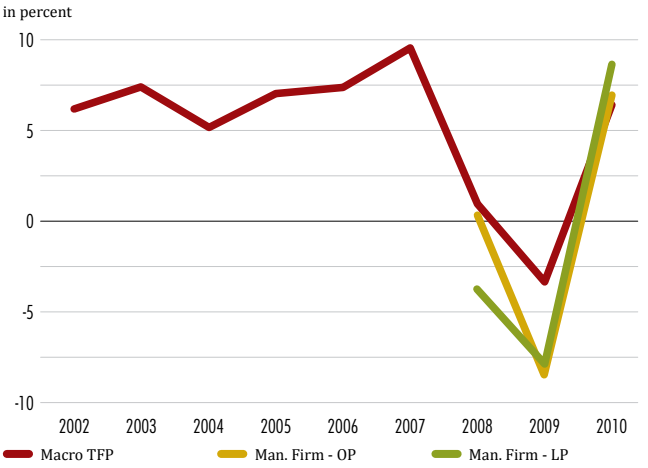
Overall labor productivity and total productivity growth in Georgia have been positive and high during 2002–10, except for the sharp downturn during 2008–09. In figures 2.1 and 2.2, 'Macro-LP' and 'Macro-TFP' refer to labor productivity and total factor productivity derived from national accounts, while the other series

Figure 2.1: Labor Productivity Growth



Source: Geostat and World Bank staff estimates.

Figure 2.2: Total Factor Productivity Growth

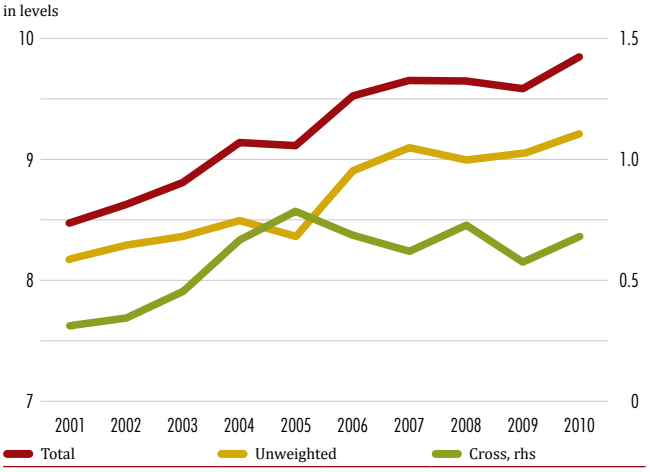


Source: Geostat and World Bank staff estimates.

use the average of firm growth rates or the growth rates of aggregate labor productivity from the firm level data.[8] Firm-level TFP in figure 2.2 is calculated using the available panel data for manufacturing using two different computational techniques.[9] Across all seven productivity series, the overarching patterns are very similar which suggests that the underlying firm level data and the microeconomic methodologies employed capture the broad macroeconomic trends. As labor productivity doesn't account for changes in capital usage, labor productivity measures are higher than TFP measures when growth is positive. Georgia, like other ECA countries, benefited from high TFP growth rates through 2007. In an environment where transition related productivity gains are becoming exhausted, maintain high TFP growth rates will require reforms to remove impediments in new areas.

Allocative efficiency, which is a measure of how efficiently factors of production are allocated, has remained stagnant since 2005 in the manufacturing sector in Georgia. The most widely used measure of allocative efficiency comes from (Olley & Pakes, 1996), where "cross term" captures whether firms with larger market shares have higher productivity.[10] Even if the productivity level within each firm remains unchanged, if more productive firms get larger and less productive firms shrink, then allocative efficiency (cross term) and total productivity in the manufacturing sector would rise over time. The measure, therefore, captures whether or not market conditions are facilitating the process of productivity-enhancing creative destruction and reallocation.[11] Figure 2.3 shows the evolution of overall productivity, the unweighted average across firms, and the cross-term measuring allocative efficiency in the manufacturing sector in Georgia during 2001–10. While overall productivity and the unweighted average across firms have steadily increased during this period, allocative efficiency has stagnated since 2005. Allocative efficiency did rise markedly during 2004–05, but this was not sustained over time. In spite of the impressive reforms implemented in Georgia since 2004, the stagnation in allocative efficiency since 2005 suggests that additional reforms from the perspective of enhancing market efficiency will be needed to unleash the process of creative destruction in manufacturing.

Figure 2.3: Productivity and Allocative Efficiency in Manufacturing in Georgia



Source: Geostat and World Bank staff estimates.

The transition in Eastern Europe saw large increases in allocative efficiency, as factors of production migrated more freely and large inefficient firms exited the market.[12] Many countries in Eastern Europe had measured levels of allocative efficiency that were negative in the early 1990s, thanks to the number and size of

8 The data comprises of two distinct panels: 2001–2005 and 2006–2007 and therefore there is no growth rate for 2006 for series that use the firm level data.

9 OP refers to Olley & Pakes, 1996, and LP refers to Levinsohn & Petrin, 2003.

10 The Olley & Pakes, 1996, cross term is defined as $\sum_i \Delta s_{it} \Delta p_{it} = \sum i\,(s_{it} - \bar{}(s_t))(p_{it} - \bar{}(p_t))$, where s_{it} is firm i's market share (defined in terms of either revenue or labor), $\bar{}(s_t)$ is the unweighted mean share, p_{it} is firm i's productivity, and $\bar{}(p_t)$ is the unweighted mean productivity, therefore the cross terms can be thought of as a covariance of market shares and productivity.

11 See Bartelsman, Haltiwanger, & Scarpetta, 2008.

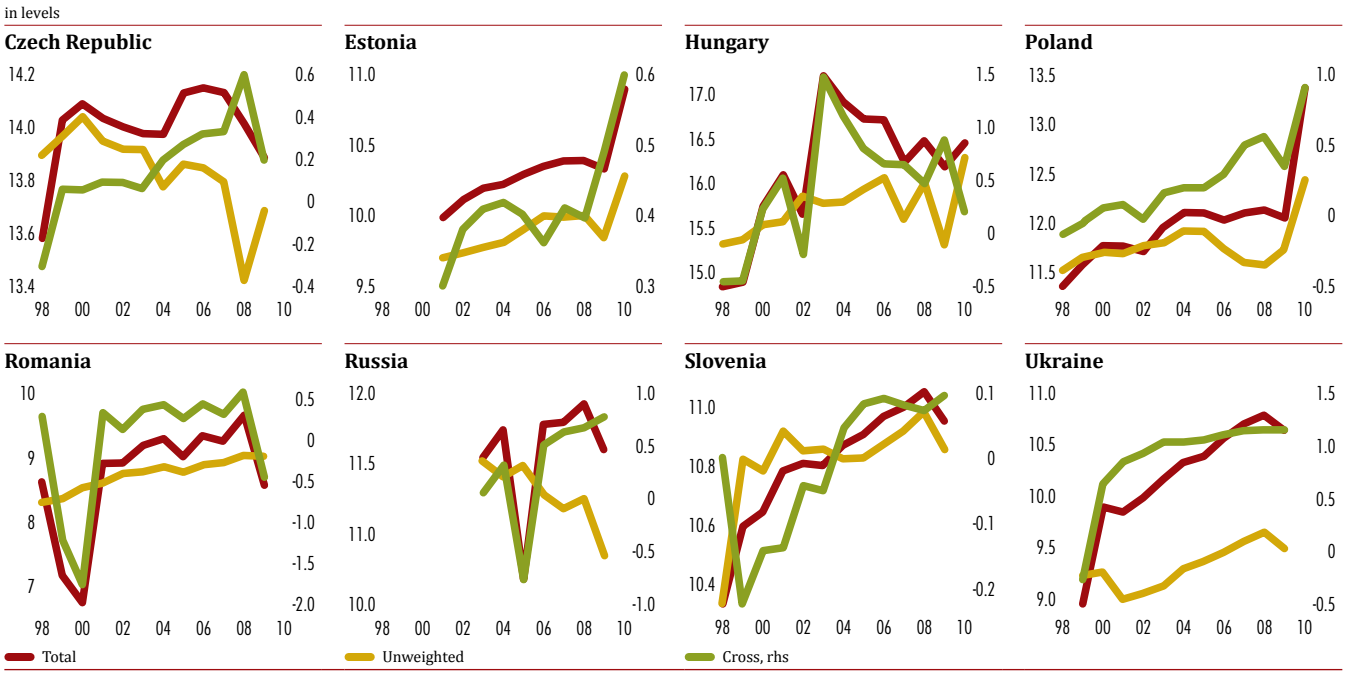
12 Bartelsman & Scarapetta, 2007.

inefficient state owned enterprises. As these firms restructured and privatized, the inverse correlation between size and productivity began to reverse as markets became more efficient. Deregulation following transition was, therefore, associated with substantial TFP growth as well as improvement in allocative efficiency. As the one-off gains from transition disappear, a key challenge facing transition economies is how to maintain a reform program to continue to enhance allocative efficiency.

Comparing Georgia to neighboring benchmark economies provides a useful narrative of economies that have succeeded in sustaining improvements in allocative efficiency after the transition and those that have not. Figure 2.4 shows manufacturing allocative efficiency in eight transition economies and Russia. In Estonia, the Czech Republic, Poland, Slovenia and to a lesser extent Romania, the reform agendas have generated large and sustained gains in allocative efficiency. Estonia, a stellar performer, almost tripled its exports between 2000 and 2010, even in an environment of an appreciating exchange rate, and this was largely due to productivity enhancements supported by its sound macroeconomic management and business environment reforms.

Figure 2.4: Manufacturing Allocative Efficiency in Eastern Europe and Russia

in levels



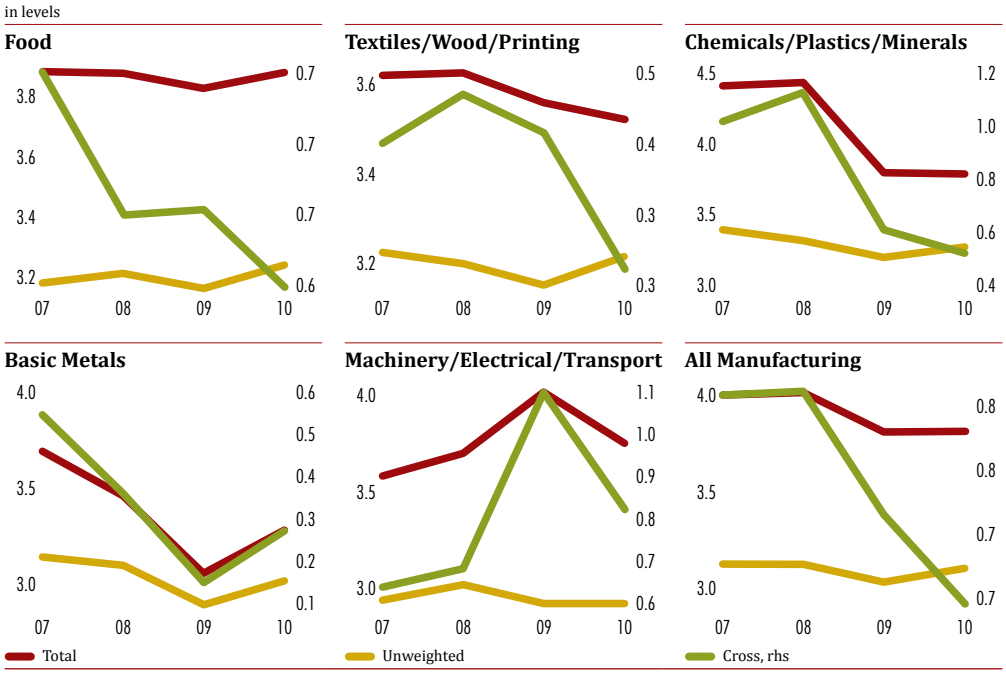
Source: Bank staff estimates using Amadeus Dataset.

Hungary and Ukraine provide a cautious reminder of the pitfalls of a decline or stagnation in allocative efficiency. In Hungary, overall labor productivity has been declining since 2003 as has allocative efficiency. With a debt to GDP ratio of 140 percent, falling investment, and significant foreign exchange exposure especially in its mortgage sector, Hungary in recent years has suffered from a viscous cycle of low investment and high levels of debt, which have contributed to rising market distortions in manufacturing. Ukraine's narrative is one of slow reforms with, for example, weak public institutions, stalling business environment reforms, and bank non-performing loans as high as 15 percent. The slow pace of these reforms has meant that increases in productivity have come less from the intensive margin as from the extensive margin. The experience of Ukraine and Hungary suggest that jumpstarting stagnant allocative efficiency in manufacturing in Georgia could be important in avoiding going down the path of economic stagnation.

Given the vastness of the manufacturing data, looking at the patterns of allocative efficiency within subsectors is also informative. Manufacturing comprises many activities and with each country's differing comparative advantage and specializations, it is useful to look at productivity within manufacturing subsectors. Furthermore, since labor productivity can be affected by capital deepening, it is also useful to decompose total factor productivity rather than labor productivity. Data availability, however, only allows a decomposition of TFP for the period 2007–2010.[13]

Within the subsectors of manufacturing, TFP generally fell during 2007–10, with even sharper declines in allocative efficiency of TFP. Although figure 2.2 showed that TFP growth was positive in 2010, that measure referred to the mean for all firms in manufacturing, whereas figure 2.5 looks within subsectors of manufacturing.[14] In four out of five manufacturing subsectors, in addition to stagnant or declining TFP, the allocative efficiency component fell considerably during 2007–10. The decline in TFP and allocative efficiency during the economic downturn of 2008–09 is not unexpected, but continued decline in 2010 suggests that the process of creative destruction whereby more productive firms become larger has not led the way during the recent economic rebound in Georgia. As the firm level data is not a census but a survey, there are indeed concerns about neglecting the role of entry, but given that most firms enter markets as small firms in both developing and developed countries, ignoring entry would most likely impose a lower bound to allocative efficiency.[15]

Figure 2.5: TFP Allocative Efficiency within Manufacturing in Georgia



Source: Geostat and World Bank staff estimates.

13 TFP calculations at the firm level need either investment or electricity usage (or a similar input) in addition to material inputs in order to estimate efficiently, and therefore the data before 2007 cannot be used as these variables were not collected.

14 TFP is calculated using Olley & Pakes, 1996, the results using Levinsohn & Petrin, 2003, are qualitatively the same, and are suppressed for brevity. These categories are derived from Geostat's disaggregated GDP statistics; where Food comprises between 5.4 to 6.5 percent of GDP, Textiles, Wood and Printing between 1.5 and 1. 7 percent, Chemicals, Plastics, Minerals 3.1 percent, Basic metals 1.8 to 2.6 percent, Machinery, Electrical and Transport 0.7 to 0.9 percent.

15 Hsieh & Klenow, The Life Cycle of Plants in India and Mexico.

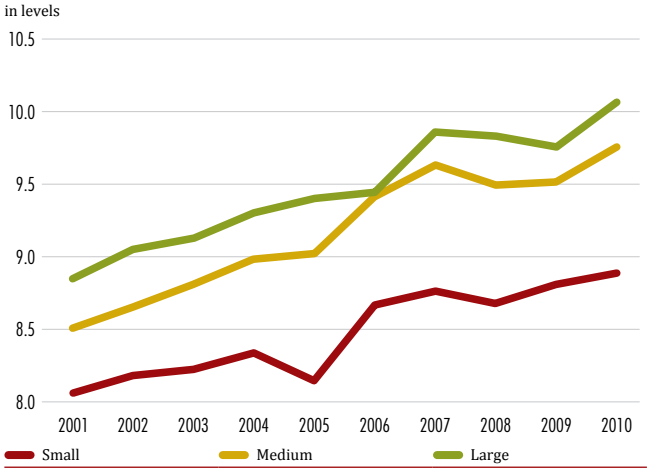
Productivity Dynamics with Firm Size and Lifecycle

A stylized finding in the empirical research on firm size is that larger firms are more productive, with many theoretical models explaining this finding.[16] Furthermore since most firms enter as small firms, enabling firm growth is often a target of business environment policies related to productivity. As a result, there is a renewed focus on understanding the constraints to firm growth and the dynamics of the growth transition from small to medium to large firms.[17]

As with most firm level studies, the pattern of increasing productivity with firm size is also true for manufacturing in Georgia, although the productivity advantage for larger firms in Georgia is much less than in other ECA countries. Figure 2.6 and 2.7 show mean labor productivity and TFP across firm size for the years that these measures are available.[18] Across both measures there is a strong relationship between firm size and productivity: larger firms are, on average, more productive than smaller firms. However the difference between medium and large firms is relatively small, and in 2009 and 2010, TFP for large firms is indeed smaller than that of medium firms and this is likely a repercussion of the economic downturn in 2008–09. Using the same firm size categories, other countries in the region appear to have much larger productivity differentials across firm size. Although the average firm size in Georgia is about half of the average firm size in Hungary and a third of the average firm size in the Czech Republic, large firms in these latter two countries have much higher productivity differentials on average; ratios between large and small firms exceeding multiples of twenty in comparison to multiples of below two in Georgia. This suggests that if manufacturing is to grow through productivity improvements, larger firms in Georgia will likely have to drive the productivity train from the front.

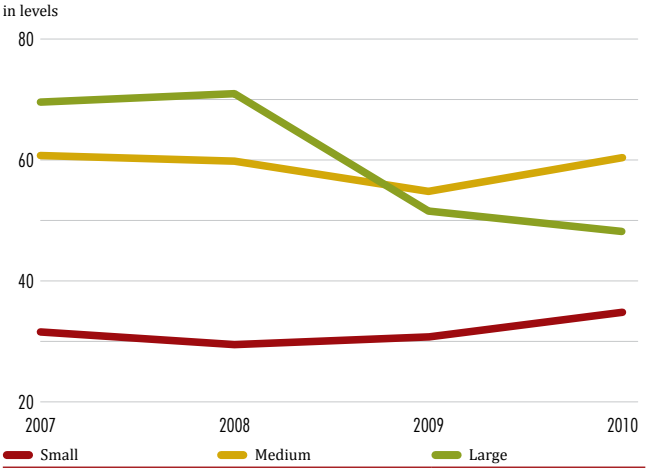
Although larger firms in Georgia are more productive than smaller firms, the degree of dispersion is smaller than other countries and this suggests that, as with the evidence from the allocative efficiency,

Figure 2.6: Mean Manufacturing Labor Productivity by Firm Size in Georgia



Source: Geostat and World Bank staff estimates.

Figure 2.7: Mean Manufacturing TFP by Firm Size in Georgia



Source: Geostat and World Bank staff estimates.

16 See Foster, Haltiwanger, & Krizan, 2001.

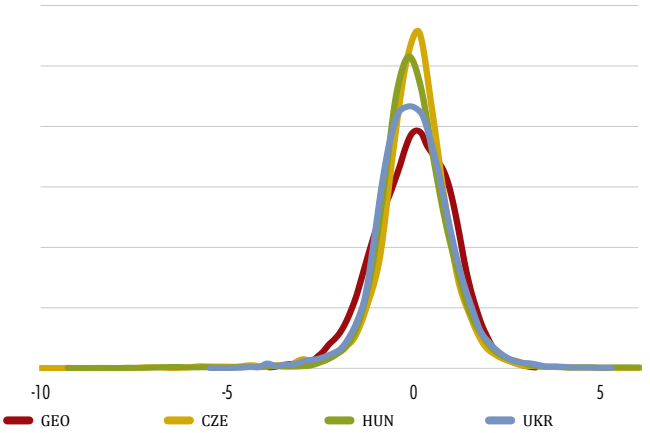
17 See Hsieh & Klenow, 2011, for India and Mexico, Braguinsky, Branstetter, & Regateiro, 2011, for Portugal and Garicano, Lelarge, & van Reenen, 2012, for France.

18 Small refers to 0–20 employees, Medium 21–100 and Large is above 101 (these are the official Geostat firm size categories.

there is scope to improve the dynamism of market conditions. Figure 2.8 shows the normalized labor productivity distribution in manufacturing in 2006 in Georgia, the Czech Republic, Hungary and Ukraine. What is evident is that the distributions in these three comparator countries is markedly more peaked, which implies that these distributions have fatter tails. Measuring the kurtosis provides a useful measure of how peaked these distributions are: the kurtosis in the Czech Republic is 11.3, in Hungary 10.8, in Ukraine 4.9 and in Georgia 2.8. Therefore, in the Czech Republic in particular, there are both more extremely productive firms and also more extremely unproductive firms. In the cross section, this suggests that the process of creative destruction in the Czech Republic exhibits enhanced degrees of entry, exit and firm growth. It will be important to understand how these degrees can be enhanced in Georgia.

Figure 2.8: Distribution of Labor Productivity

in normalized productivity levels



Source: Staff estimates using AMADEUS and Geostat data.

Analysis of firm growth and productivity over its lifecycle is another angle of looking at firm dynamics and the initial results from this nascent literature show that developing countries lag developed countries in firm lifecycle growth. (Hsieh & Klenow, 2011) show that the size at which firms enter in India is the same size as firms that are over thirty years old, whereas in Mexico firms are born small and grow to about double their size, while in the U.S older manufacturing plants employ more workers than do younger plants, and in the cross-section forty year old plants are more than six times larger than plants under the age of five.[19]

In Georgia, the evidence suggests that over their lifecycle, firms are born small and grow by twenty percent in ten years, whereas at the same point in time US firms are double their initial size and Mexican firms are seventy percent larger. Figure 2.9 shows employment over the lifecycle in the U.S, India and Mexico while figure 2.10 shows the corresponding data for Georgia. Firm size in normalized to one for firms less than five or one year of age in each graph respectively, and the evolution of firm growth is displayed over their lifespan. Although the available data for Georgia is much shorter and is limited to firms less than 16 years, the evidence shows that firm growth is much lower in comparison to U.S or Mexican firms, though better than Indian firms. In India, the literature has pointed to a strong incumbency bias of older firms, hysteresis, significant management constraints for larger firms, and regulation as barriers to firm growth.[20] The evidence on Mexico suggests that payroll taxes are more stringently enforced on larger plants, thereby discouraging plants from taking costly investments.[21] Although there is less systematic evidence on why firms grow slower over the lifecycle in Georgia, the figures suggest that the constraints are likely of the same order of magnitude as those faced by firms in Indian manufacturing.

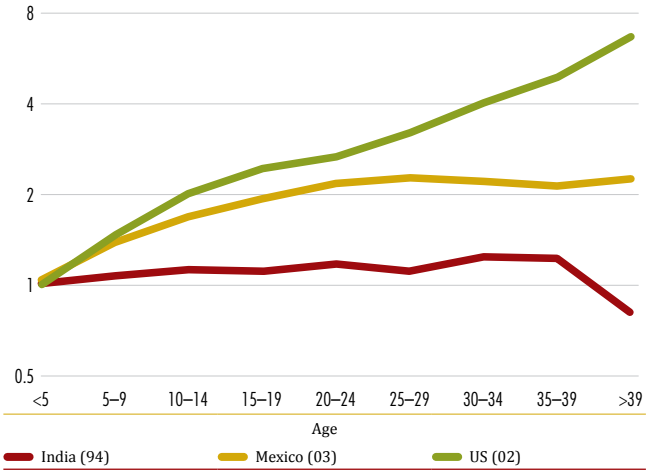
19 Hsieh & Klenow, 2011.

20 Bloom, Eifert, Mahajan, McKenzie, & Roberts, 2011, and Hsieh & Klenow, 2011.

21 Levy, 2008.

Figure 2.9: Plant Employment by Age: International Evidence

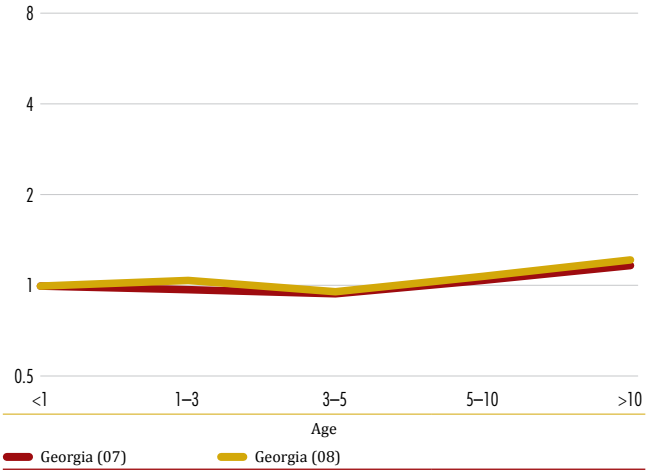
Employment <5=1 (log-scale), in log number of employees



Source: Hsieh and Klenow (2012).

Figure 2.10: Plant Employment by Age: Georgia

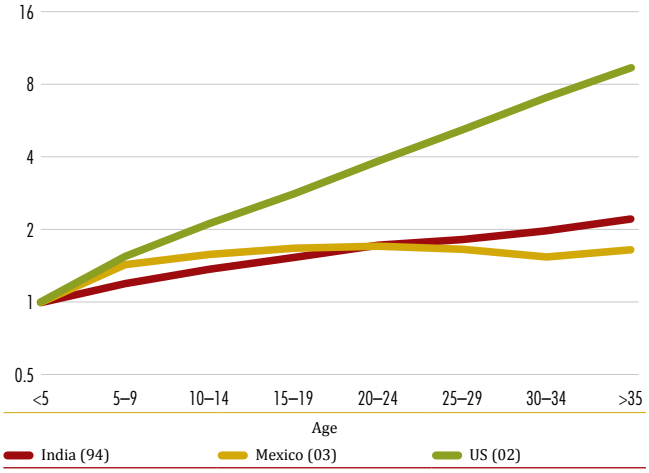
Employment <1=1 (log-scale), in log number of employees



Source: Geostat 2007/2008 SME Survey combined with Enterprise Survey (2008).

Figure 2.11: Productivity over the Lifecycle: International Evidence

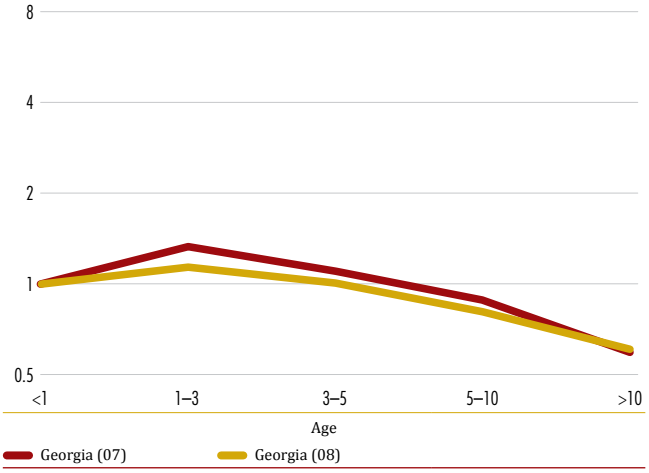
Productivity <5=1 (log-scale), in log levels



Source: Hsieh and Klenow (2012).

Figure 2.12: Productivity over the Lifecycle: Georgia

Productivity <1=1 (log-scale), in log levels



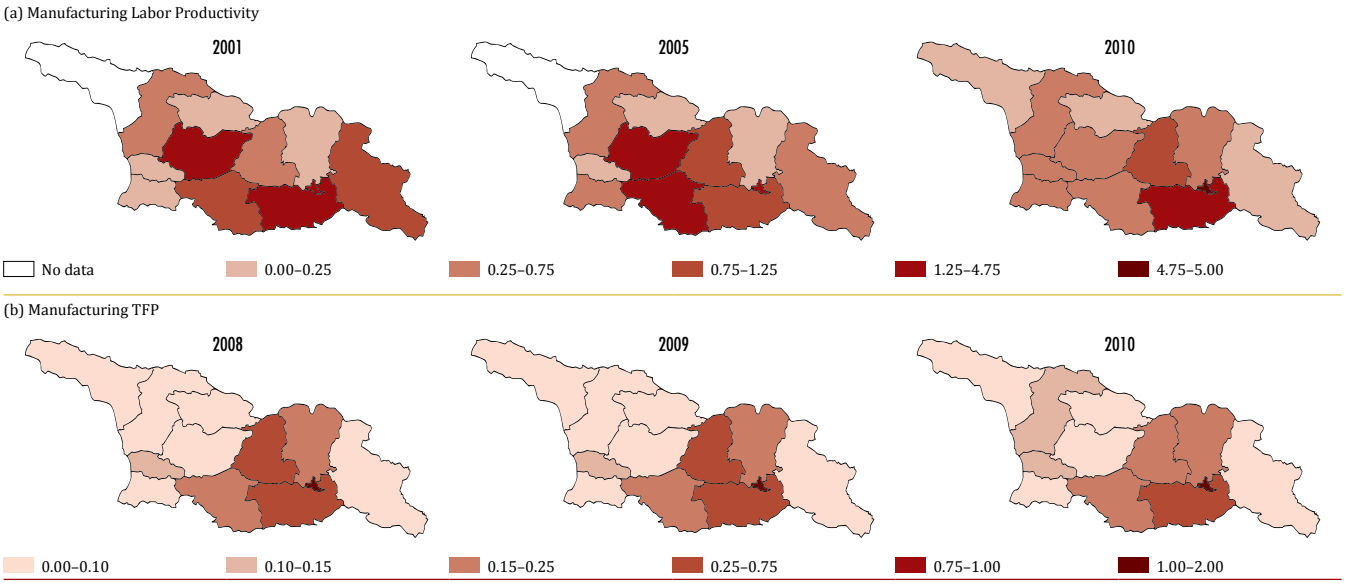
Source: Geostat 2007/2008 SME Survey combined with Enterprise Survey (2008).

The evidence on productivity over the firm lifecycle in Georgia is less impressive than in Mexico, India and the U.S, with the legacy of centralization likely affecting the productivity of older firms, although the reforms started in 2004 may be mitigating the perverse pattern. Figure 2.11 shows productivity over the lifecycle in the comparator countries, while figure 2.12 shows the corresponding data for Georgia. In India and Mexico, older firms are twice as productive compared to a ratio of eight in the U.S. In Georgia older firms are approximately sixty percent less productive than younger firms. Given the legacy of the centralized economy in Georgia, the results for firms more than five years old may indeed be heavily biased, although the reforms from 2004 onwards do seem to have significantly improved the evolution of firm productivity in this short history. However the persistence of older less productive firms may still be hindering the process of improving allocative efficiency.

Regional distribution of productivity

Analyzing the spatial dimension of manufacturing in Georgia indicates that higher productivity firms have been gravitating closer to Tbilisi in recent years. The 2009 World Development Report highlights the importance of exploiting agglomeration economies across a portfolio of cities in order to enhance economic growth. The experience of manufacturing in China and to a lesser extent the resurgence of manufacturing in Eastern Europe has demonstrated the benefits of such agglomeration. During Soviet times in Georgia, Kutaisi in Imereti was one of the main industrial centers, with food canning, silk-winding, auto manufacturing, and metal and manganese factories. Recent evidence points to manufacturing gravitating closer to Tbilisi. Figure 2.13 shows manufacturing labor productivity and TFP across the twelve regions of Georgia between 2001 and 2010. Two main patterns are evident from the graphs: the first is that the distribution of higher productivity firms has become more concentrated around Tbilisi and Kvemo Kartli; and the second is the convergence in productivity levels in all areas outside this new industrial center of Tbilisi.

Figure 2.13: Manufacturing Labor Productivity and TFP by Regions



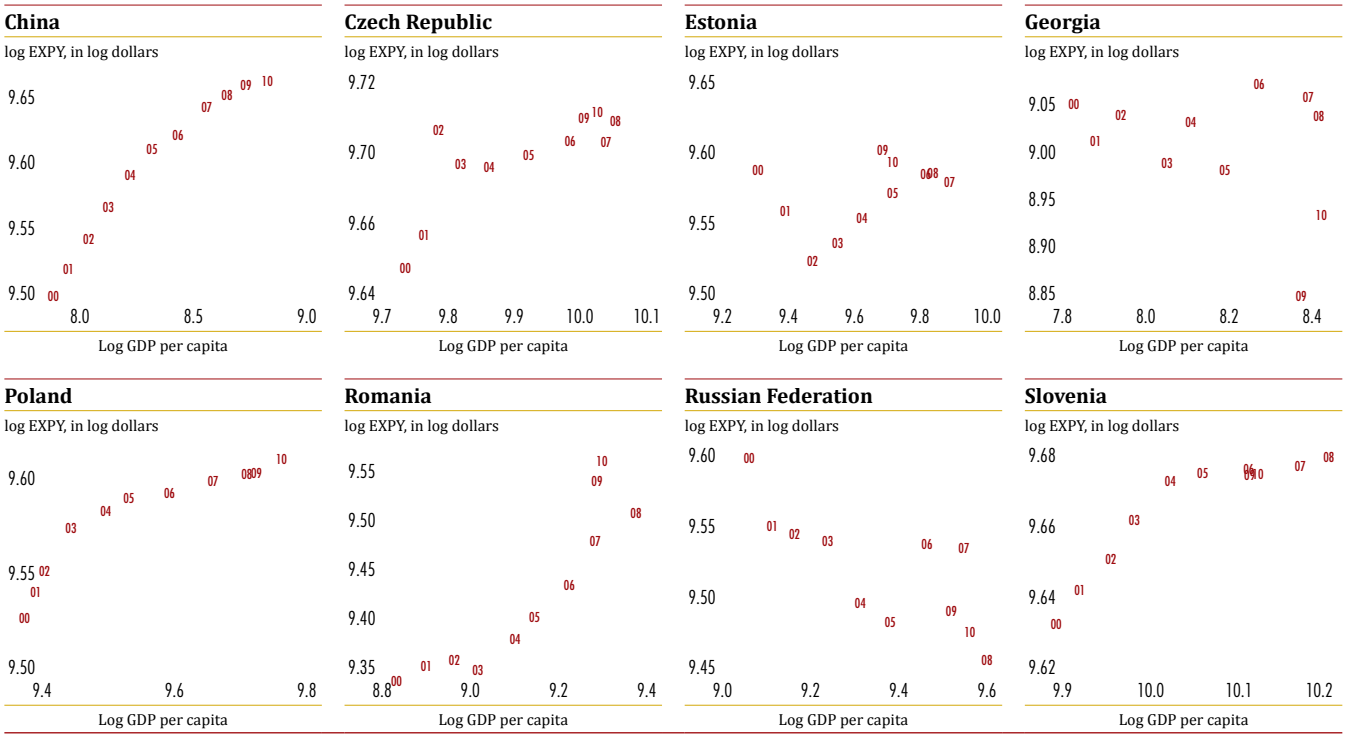
Source: Bank staff estimates.

Beyond the productivity migration towards Tbilisi, the number of firms and the share of output have also gravitated towards the center. The number of manufacturing firms in Imereti dropped from 22 percent in 2001 to 12 percent in 2010, but increased from 35 to 48 percent in Tbilisi over the same period. Firm revenue in manufacturing remained at about 40 percent in Tbilisi across the decade, but increased in Kvemo Kartli from 15 to 25 percent, and decreased in Imereti from 14 to 3 percent. International evidence points toward increasing concentration of new firms in regions with good market access and infrastructure. The evidence in Georgia suggests that manufacturing is leaving the historic industrial region, so that the adoption of the Free Industrial Zones in Poti and Kutaisi can be important to the extent that a portfolio of cities is more optimal. In addition to FIZs, the provision of adequate infrastructure in alternate centers would also be important.

Exports and Productivity

Analyzing the evolution of export sophistication in Georgia suggests that stagnant allocative efficiency in manufacturing has hurt export growth in recent years. International evidence indicates that plants which begin exporting are already more productive than their non-exporting industry counterparts, so that large productivity gains are one mechanism of increasing exports.[22] Although the available data cannot compare firm productivity to exporting behavior, an alternative approach is to look at the evolution of export sophistication. Rapid and sustained gains in export sophistication are usually found in countries experiencing gains in manufacturing productivity and allocative efficiency. One measure of export sophistication (called EXPY) is derived by firstly measuring the sophistication of a single product and then calculating the sophistication of a country's entire export basket.[23] Figure 2.14 shows export sophistication and per capita GDP for seven comparator countries and Georgia during 2000–2010. In the countries that have had strong export-led growth, China, Czech Republic, Estonia, Poland, Romania and Slovenia, export sophistication has improved considerably over the decade. Comparing these trends to the increases in allocative efficiency from figure 1.14 suggests that countries that have had increases in firm allocative efficiency have also experienced increases in export sophistication. In Georgia, however, export sophistication has experienced no improvement over the decade.

Figure 2.14: Export Sophistication and per capita GDP 2000–2010



Source: World Bank staff estimates.

22 Syverson, 2011.

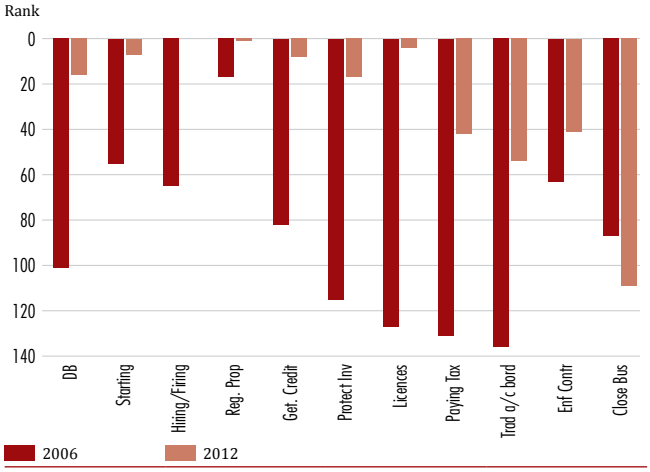
23 Hausmann, Hwang, & Rodrik, 2007, derive EXPY by taking a weighted average of the per-capita GDPs of the countries exporting a product, where the weights reflect the revealed comparative advantage of each country in that product. For each good, they generate an associated income/productivity level (called PRODY). They then construct the income/productivity level that corresponds to a country's export basket (called EXPY), by calculating the export-weighted average of the PRODY for that country. EXPY is their measure of the productivity level associated with a country's specialization pattern.

Looking within manufacturing sectors that have a higher incidence of exports suggests that the mutually reinforcing process of productivity gains and export growth has not taken off in Georgia. The manufacturing sectors with greatest representation in Georgia's export basket include metals, food, chemicals, and transport equipment. Of these, productivity growth during 2005–10 has been poor in metals, high in transport equipment, and about average in food and chemicals. While export growth has been brisk in metals, it has actually been negative in food and transport equipment during 2005–10.

2.3. Constraints to Firm Growth and Allocative Efficiency

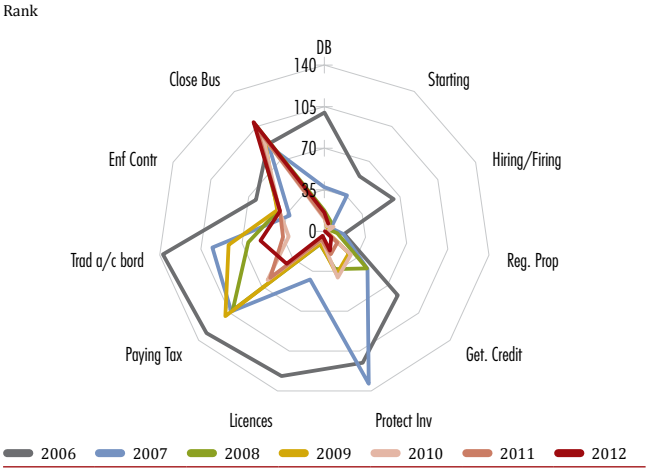
Notwithstanding Georgia's widely acclaimed performance in improving its business environment since 2004, progress in improving the ease of closing a business remains elusive. Georgia's ranking in the World Bank's Doing Business indicators has improved remarkably from 137th out of 183 countries in 2004 to 11th in 2010. Figure 2.15 shows Georgia's stellar progression between 2006 and 2012, while figure 2.16 shows all years between 2006 and 2012 to understand the speed and nature of Georgia's reforms. The tidal reforms that Georgia undertook from 2004 onwards, improved business regulation across all but one indicator. In terms of starting a business, in 2004 there were nine different bureaucratic steps to establish a business and this has now been reduced to three simple steps. In licensing, Georgia has reduced by 85 percent the types of activities that require a license. The only indicator that has worsened between 2006 and 2012 is the ease of closing a business. In terms of the creative destruction process, exit is arguably just as important as entry, and as evidence from India shows, preventing incumbency exit can have strong negative consequences for aggregate firm growth and productivity.[24] Anecdotally, there is evidence in Georgia that filling zero tax returns is indeed easier than officially closing firm operations. Therefore, improving the ease of closing a business is an immediate policy recommendation to address stagnant allocative efficiency and support productivity growth.

Figure 2.15: 2006 and 2012 Doing Business Rankings in Georgia



Source: WB Doing Business 2006–2012.

Figure 2.16: Annual Doing Business Rankings in Georgia

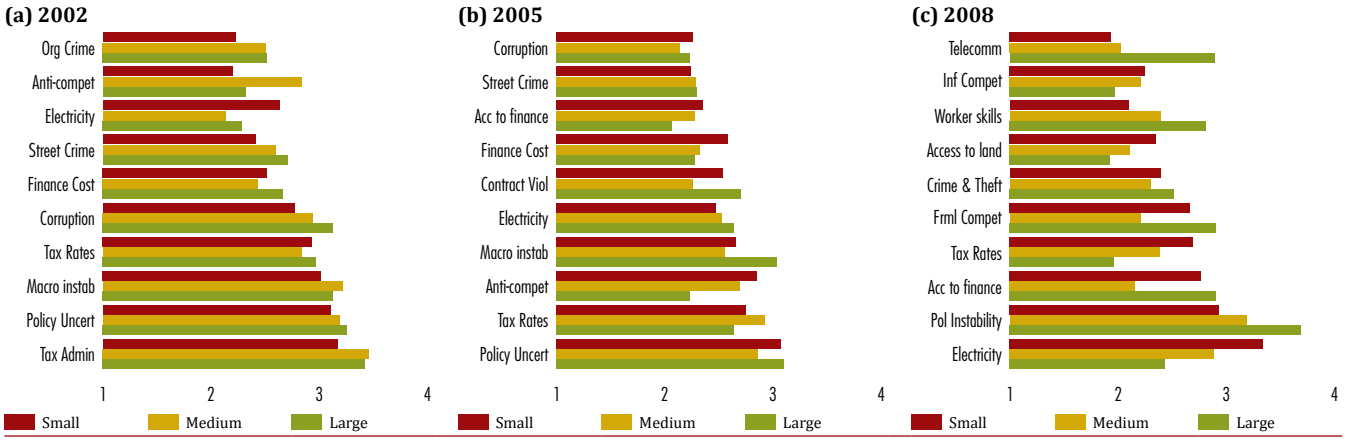


Source: WB Doing Business 2006–2012.

24 Hsieh & Klenow, 2011.

Between 2002 and 2008, Georgian firms' self-reported obstacles highlight both the success of the reforms from 2004 as well as the evolving nature of the most pressing constraints. The World Bank's Business Environment and Enterprise Performance Survey (BEEPS) for ECA countries that probes critical constraints to firm growth and success now has almost a decade of data. Figure 2.17 shows the severity of the top ten self-reported firm obstacles, classified by firm size, where a response of one corresponds to no obstacle and a response of four corresponds to a severe obstacle.[25] The successful fight against corruption and the simplification of tax administration both manifest themselves in the responses between 2002 and 2005: tax administration was the leading obstacle for all firm sizes in 2002 while by 2005 it moved to seventeenth place (not shown in the figure), while corruption ranked sixth in 2002 and improved to tenth by 2005. The tax administration obstacle was no longer asked in 2008, though corruption was asked and it had moved even higher to twelfth in 2008 (not shown in the figure).

Figure 2.17: Severity of Top Ten Firm Obstacles by Firm Size in Georgia 2002–2008



Source: World Bank/EBRD Business Environment and Enterprise Performance Survey.

Electricity and access to finance have risen to the leading obstacles reported by firms in 2008, policy uncertainty and political instability have remained among leading obstacles, and worker skill is reported as a leading obstacle particularly for large firms. Electricity has gradually become an obstacle for firms in Georgia, and especially so for small firms. In 2008, electricity was the leading constraint for all firms and the highest for small firms.[26] Access to finance, which is a ubiquitous response in other countries, has surfaced as a leading obstacle in 2008 in Georgia, and this is the case for both small and large firms. Finally, with worker skills are often cited as a major obstacle in Eastern Europe, the data from Georgia suggest that this is particularly true for large firms.

The constraints reported by Georgian firms stand out along some dimensions when compared with those reported in other ECA countries. In the ECA region overall, the leading three obstacles are tax rates, access to finance, and practices of the informal sector, while in Armenia they are practices of the informal sector, tax rates and political instability. Between 2002 and 2005, the percentage of firms citing access to finance as a major

25 Firm size classes are derived from Geostat's official classification, small is 0–20, medium is 20–100 and large is over 100.

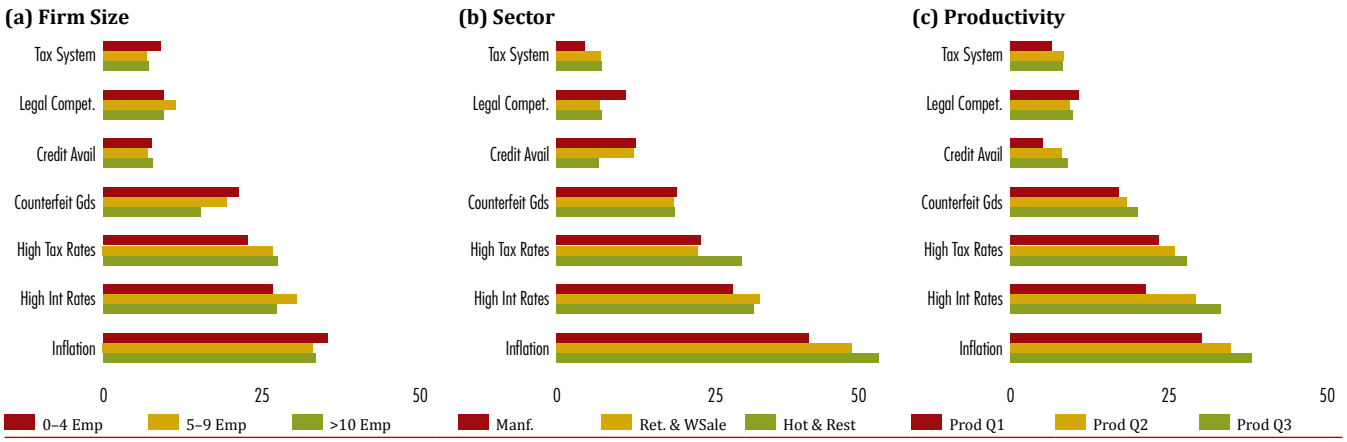
26 Depending on the firm weights used, electricity either emerges as the first or third constraints. The data shown here uses the strictest weights.

obstacle in ECA decreased for almost all countries, but in Georgia the number increased from 10 to 24 percent. In Estonia, the percentage decreased from 14 to 6 percent, in Armenia it decreased from 19 to 16 percent, and in Tajikistan it decreased from 18 to 4 percent. By 2008 the three countries of the South Caucasus all increased their percentages of the firms citing access to finance as a major obstacle, though again Georgia stands out in that it is ranked third across the ECA region after Moldova and Romania in terms of the magnitude of the obstacle across firms. Although there is an element of dependency across different obstacles within countries, these cross-country differences and the progression of the access to finance and electricity indicators over time in Georgia suggest that these are significant constraints to firm growth and productivity in Georgia.

A much larger business environment survey conducted across SMEs in Georgia in 2007 and 2008 provides firm constraints across broader firm characteristics. As part of the quarterly national firm survey in Georgia in 2007 and 2008, a business environment supplement was added to the quarterly survey for all Small and Medium Size Enterprises (SME), which in Georgia are firms with less than a hundred employees. The survey included both fixed responses with options and a free response section where firms were asked to list their top three major factors necessary for successful business development.

Inflation, high interest rates and high tax rates emerge as the leading obstacles across all firm sizes, sectors and productivity terciles, though the fixed response section did not provide an option for political, policy uncertainty or electricity. Figure 2.18 shows the percentage of SMEs citing the top seven obstacles across firm size, sector and productivity. The results show a significant amount of harmony across these three firm characteristics. The top three ranking across all nine sub-characteristics of firm size, sector and productivity all concur that high tax rates, high interest rate, and inflation are the leading obstacles. Interestingly, the top productivity tercile reports high interest rates eight percentage points higher than the other two terciles, and across inflation the difference between the top and bottom productivity tercile is ten percentage points.

Figure 2.18: Percentage of SMEs Citing Top Seven Obstacles in Georgia 2007



Source: Geostat SME business environment survey.

The free response section also points toward inflation, taxes, and interest rates as the leading necessary factors for business development. For the 8,000 firms sampled in the quarterly survey, seventy percent provided as least one necessary factor for business development. These are summarized in figure 2.19, where the font size in the word cloud rises with the frequency with which a word is cited by firms. Inflation, taxes and interest

rates again emerge as the leading factors. For example, "taxes" is mentioned 1,482 times and "prices" is mentioned 1,228 times. Although some of the meaning is lost both in machine translation to English and also in condensing phrases to single words, the free responses provide a useful tool for comparison with the more systematic fixed responses.

Figure 2.19: Word Cloud of SME Necessary Factors for Business Development in 2007 and 2008

Source: Geostat SME business environment survey.

Overall, this section points toward several key constraints to improving firm performance and allocative efficiency in Georgia, including inflation, interest rates, taxes, electricity tariffs, political uncertainty, the ease of firm exit and worker skills. The next section considers the constraints of access to finance, electricity tariffs, and taxes in greater detail to assess whether each is indeed a binding constraint, while the worker skill constraint is considered in greater detail in the following chapter.

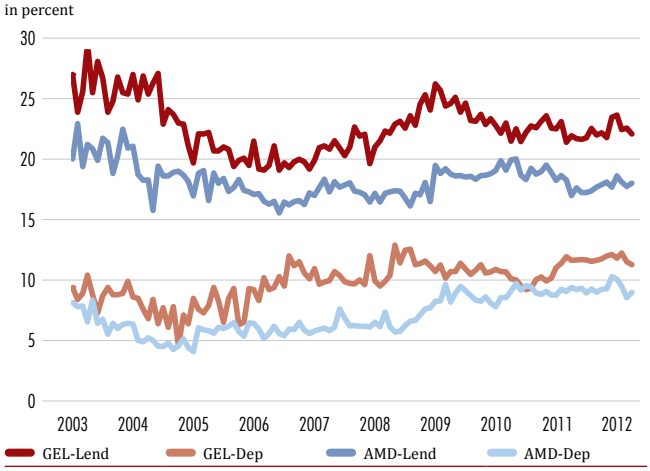
2.4. Exploring the Validity of Firm Constraints

Lending Interest Rates

Lending and deposit rates in Georgia have systematically been higher than in Armenia. The two countries have similar financial systems that are highly dollarized and both financial systems were able to respond effectively to the 2008 crises. For this reason, this section focuses on comparing lending rates in these two countries. Although the Georgian banking system is much more concentrated, they both have similar credit to GDP ratios. Figures 2.20 and 2.21 show local and foreign currency lending and deposit rates in Georgia and Armenia. Over the 2003–2012 period local currency lending rates in Georgia have been on average 456 bps higher than in Armenia, while local currency deposits rates have also been 275 bps higher in Georgia. Before 2008, lending rates in foreign currency (almost exclusively USD) were very similar in the two countries, but it is now markedly higher in Georgia, although there has been approximately 10 percentage points more appreciation in the Armenian Dram (AMD) compared to the Georgian Lari (GEL) between 2003 and 2012.

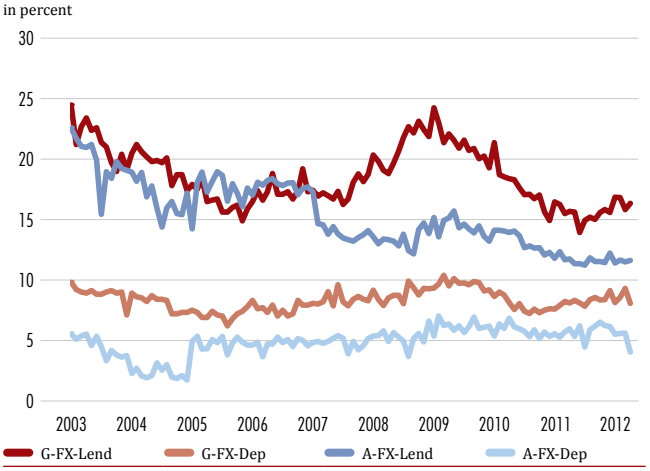
Interest rate spreads have generally fallen over time in Georgia and Armenia, although the local currency interest rate spread has risen considerably in Georgia since 2009. Although higher lending and deposit rates are indicative of higher borrowing costs for firms, bank interest rates spreads, defined as the difference between the bank lending rate and borrowing rate, are a better measure of intermediation efficiency. Figure 2.22 shows the local and foreign currency spreads in Georgia and Armenia. Local and foreign currency interest rate spreads in Armenia and foreign currency interest rate spreads in Georgia have generally decreased over time, as has happened in most countries over time. In Armenia, the April 2012 local currency banking spread was 9.1 while the foreign currency spread was 7.6, while in Georgia the foreign currency bank spread was 8.3. This

Figure 2.20: Local Currency Lending and Deposit Rates in Georgia and Armenia



Source: NBG and CBA.

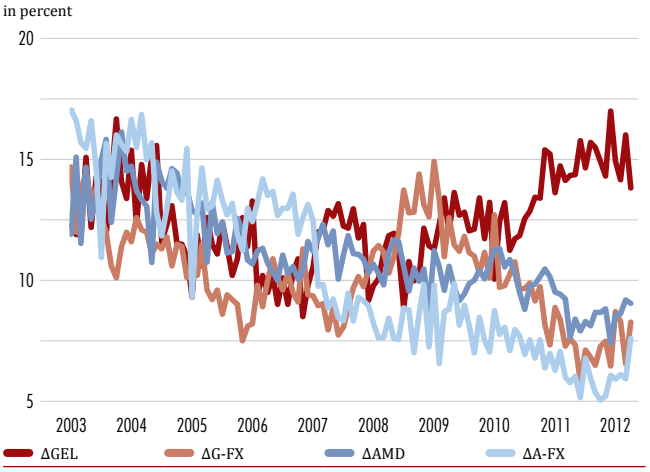
Figure 2.21: Foreign Currency Lending and Deposit Rates in Georgia and Armenia



Source: NBG and CBA.

is in line with other countries: in 2009 the spread was 10.7 percent in Turkey, 5.6 percent in Hungary, 2.6 percent in Czech Republic, and 5.5 percent in the EU12 overall.[27] However, what is of particular concern is the high local currency spread in Georgia since the beginning of 2009, and a cursory analysis of figure 2.20 suggests that sticky lending rates may be the reason.[28] Evidence from another highly dollarized economy—Argentina—shows that the lack of arbitrage opportunities for peso borrows between foreign and domestic banks, increases local currency spreads as a result of monopoly power.[29]

Figure 2.22: Local Currency and Foreign Currency Spreads in Georgia and Armenia



Source: NBG and CBA.

Given the likely existence of high lari interest rates in Georgia, it is important to understand the plausible channels through which policy can address these high interest rates. Dollarization and bank competition in Georgia are amongst the highest in the region as shown in figure 2.23 and figure 2.24. The experience of many countries in Latin America in the 1980s and the Asian Financial Crisis in 1997 has shown both the stability and vulnerability of dollarization. The process of avoiding dollarization or de-dollarization has shown to be very institutionally specific in both Chile and Peru, and slower than anticipated in Turkey.[30] This is a longer horizon objective, but a necessary objective nevertheless.

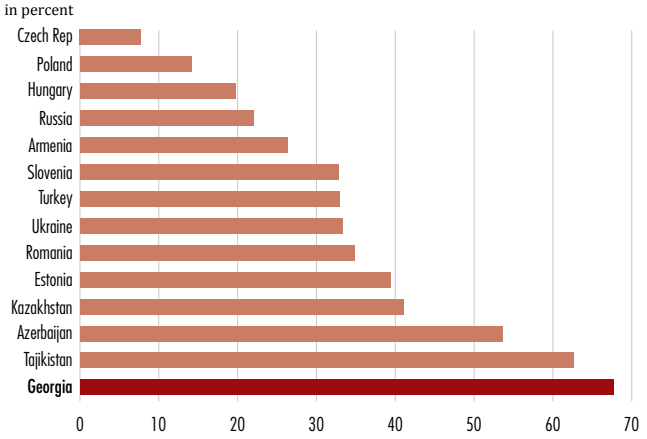
27 Kasman, Tunc, Vardar, & Okan, 2010, and Beck & Hesse, 2009.

28 NPLs have been higher in Georgia than Armenia and the monetary policy rates although different cannot explain these large differences in local currency bank interest rate spreads. Given the recent changes in the monetary policy instruments, formalized this short term lending rates in time series model is not as straightforward as in other economies.

29 Catão, 1998.

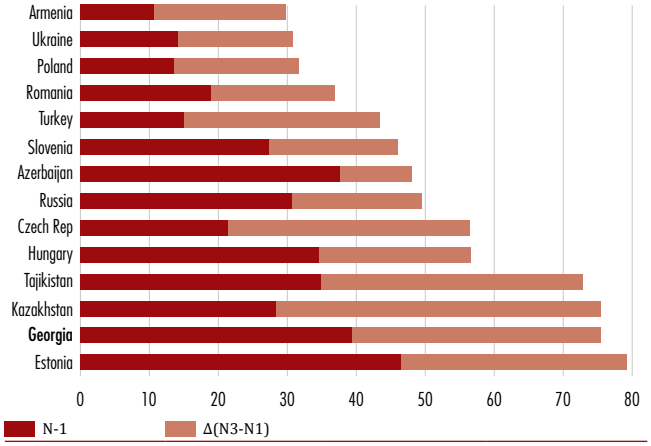
30 Garcia-Escribano, 2011, Herrera & Valdés, 2005, and Yilmaz, 2005.

Figure 2.23: Levels of Dollarization



Source: Yeyati (2010).

Figure 2.24: N-1 and N-3 Bank Concentration Ratios



Source: Bank Staff estimates.

Although evidence has shown that bank competitiveness is not necessarily directly related to bank concentration, other evidence strongly confirms the link between bank spreads and both bank concentration and greater bank entry. This latter finding has been a strong driver of the convergence of bank spreads in new EU members.[31] Therefore, in the nearer term, policies that improve bank competition, though not necessarily bank concentration, are likely to have favorable effects on lari bank spreads.

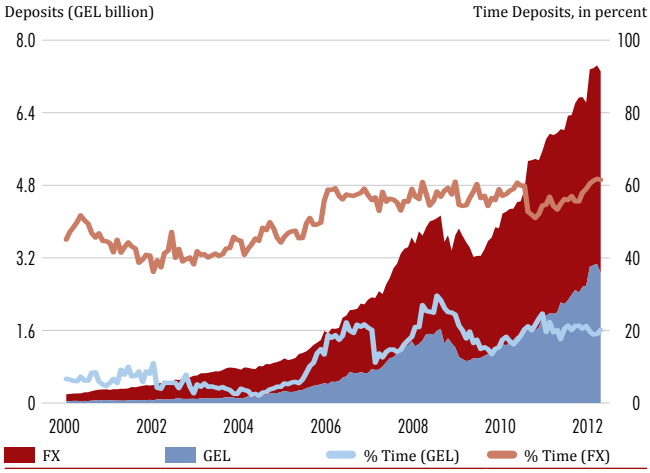
As Georgia and Armenia have begun the transition to an inflation targeting regime, the bolstering of domestic confidence in both the banking sector and inflationary expectations is a crucial cornerstone of this transition process. Figures 2.25 and 2.26 show the deposit structure in Georgia and Armenia as well as the total deposits by currency. What is striking across the two countries is the degree to which local currency is held in longer term maturities: In Georgia for every lari that is deposited, less than 25 tetri are in time deposits, whereas in Armenia for every dram deposited, just over 50 luma are in time deposits, and savings differentials cannot fully explain this difference.[32] Furthermore, the pattern for foreign currency deposits also exhibits this divergence to a much lesser degree; the ratio in Georgia is just above 60 percent while it's just above 70 percent in Armenia for foreign currency deposits. The recent development and promotion of Certificates of Deposit by the National Bank of Georgia is a promising development in addressing this liquidity bias for laris. Given the importance of the transition to an inflation targeting regime, more focus and understanding of individual savings behavior and bank preference over other forms of saving will help the convergence to lower spreads, along with the overarching strategy of a transition of an inflation targeting regime.[33]

31 See Claessens & Laeven, 2004, for a discussion of bank competition and concentration, Demirgüç-Kunt & Huizinga, 1999, for evidence of the relationship between bank concentration and bank spreads, and Kasman, Tunc, Vardar, & Okan, 2010, and Claeys & Vander Vennet, 2008, for a discussion of the role of market structure and entry on the convergence of bank spreads in new EU countries.

32 Time deposits are conservatively measured here and include those of less than a month as well.

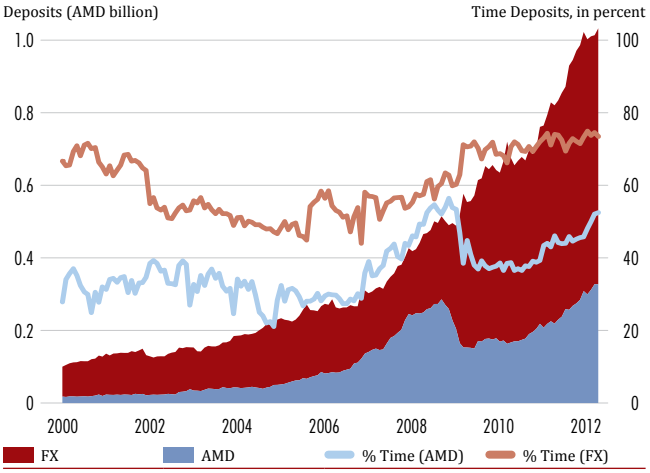
33 A recent survey of saving is Georgia suggest that confidence in the banking system may be lower than the regional average, see ACT Research, 2011.

Figure 2.25: Deposit Term Structure in Local and Foreign Currency in Georgia



Source: NBG.

Figure 2.26: Deposit Term Structure in Local and Foreign Currency in Armenia



Source: CBA.

Inflation and lending interest rates are closely connected and inflation in Georgia has been at the high end for emerging markets. Over the past decade, the average monthly inflation rate has been 6.3 percent in Georgia, 4.2 percent in Armenia, 2.6 in the Czech Republic, 5.8 in Hungary and 8.9 in Kazakhstan. Furthermore the variability of inflation is highest in Kazakhstan followed by Georgia in these five countries. Therefore inflation is high in Georgia, which rationalizes that firms report this as a constraint.

The analysis above points toward high lari interest rates in Georgia and sketches possible policy options, both longer term and shorter term to address this issue. The 2008 'Cheap Credit' program is a testament to both the need for cheaper finance and the importance of business development to Georgia's further growth. However given the long run sustainability and solvency of a non-bank lending window to fulfill some short term needs, it may not assist in institutional-led convergence to lower lari bank spreads. Therefore specific policies, such as the recent promotion of Certificates of Deposits by the NBG, and others based off sound behavioral or financial mechanisms will help in the process. The menu of options ranges from further lowering NPLs, improving bank competition, inducing bank entry, to longer term goals of taming inflationary expectations, improving confidence in local banking and the local currency; and therefore the need is for a greater spotlight on the issue and a range of diverse policies to lower spreads and thereby boosting firm productivity and allocative efficiency.

Electricity Tariffs

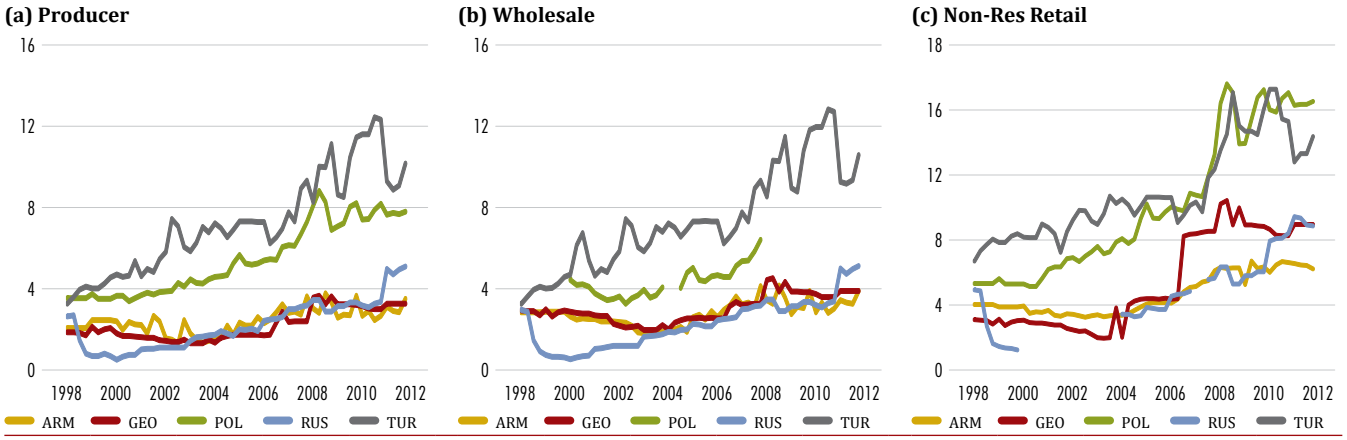
In the Europe and Central Asian (ECA) region, having firms rank electricity as one of the top three obstacles is uncommon in the World Bank's Enterprise Surveys, unlike in South Asia and sub-Saharan Africa. In ECA, electricity is ranked as the sixth most important obstacle, while is South Asia and sub-Saharan Africa it is the biggest obstacle. In the sub-region, electricity is ranked seventh in Armenia, seventh in Turkey, ninth in Slovenia and eighth in Poland. Furthermore, simply based off the rankings sequence in Georgia, electricity has risen from

eighth to fifth to first between 2003, 2005 and 2008.[34] As with lending rates, this subsection looks at the pricing of electricity from the supply-side, to ask whether there is evidence of high electricity tariffs in Georgia relative to its benchmark economies as well relative to electricity costs.

Georgia has an installed capacity of about 4500 MW of electricity generation of which 62 percent is derived from hydropower and the remaining is from thermal power plants running off natural gas. In Armenia, the composition is 53 percent thermal running off natural gas, 12 percent nuclear and the remaining is produced by hydropower plants, while installed capacity is 3200 MW.[35] The defining event in the recent history of electricity markets in the South Caucuses region was the dual blast on January 22, 2006 in southern Russia of gas pipelines from Russia to Armenia and Georgia, and a separate explosion of an electricity transmission line to Georgia from Russia.

The January 2006 blasts had an immediate effect on gas prices in both Armenia and Georgia, and due to a cessation of preferential natural gas prices in Georgia, electricity tariffs in Georgia spiked disproportionally and there is evidence that retail electricity tariffs have been upward sticky ever since. Between the second and first quarter of 2006, the end-user gas price in Georgia was 30 percent higher, and in Armenia it was 65 percent higher, while the average Europe natural gas price only increased by 4 percent in the same period. The non-residential electricity retail tariff, on the other hand, increased 88 percent in Georgia between the third and first quarter of 2006, compared to only 4 percent in Armenia.[36] Figure 2.27 shows the producer, wholesale and non-residential retail price of electricity in five neighboring countries in US cents per kWh. Furthermore, 2006 also marks the year in which energy regulation in Georgia changed. Since 2006 the Ministry of Energy has authority to issue market rules, while the Georgian National Energy Regulatory Commission (GNERC) previously had the task.[37] Although prices are lower in Russia, Armenia and Georgia compared to Poland and Turkey, the events of January 22 2006 in Georgia have had a lasting effect on end-user electricity tariffs.

Figure 2.27: Electricity Tariffs in US cents per kWh across Markets and Countries



Source: ERRA.

34 Depending on which firm weights are used electricity comes out either third or first in Georgia in 2008, and this is largely because smaller firms cite electricity significantly more often.

35 UN Data on Energy.

36 Natural gas prices charged by Russia increased from USD 100 to USD 235 per 1000 cubic meters after January 2006, therefore decomposing a broad 88 percent increase in electricity tariffs when two-thirds of the power is derived from hydropower based off natural gas prices leaves room for changes in pricing beyond costs.

37 EBRD, 2010.

To assess the stickiness of electricity tariffs in the region, looking at the pass-through rate of crude oil and natural gas prices to electricity tariffs is a robust measure of the degree of cost-based pricing. Following the common methodology of looking at inflation, money market, discount rate and exchange rate transmission rates, the same approach can be applied to the electricity sector given the high dependence on fossil fuels for electricity generation.[38] Although two-thirds of electricity in Georgia comes from hydropower, the events of January 2006 as well as the change in regulation in the same year had a marked effect on retail electricity tariffs, which suggests some pass-through of natural gas prices on end-user electricity tariffs or an adjustment in pricing closer to cost-based prices. Furthermore across the region there has been active reform and deregulation of energy markets, and Turkey is probably the most studied country in terms of its transition to cost-based pricing.[39]

Estimates of fossil fuel pass-through rates in the region show that the degree of competitive cost-based pricing is weak in Georgia and Turkey, even after the reforms after 2006. Estimates of how changes in crude oil and natural gas prices affect producer electricity tariffs are shown in Table 2.1, where the gas and oil coefficients relate to their short-run effect on electricity tariffs.[40] Panel A shows the estimates for the entire period of 2000 through 2011, with Hungary, Poland, Romania and Ukraine all have significant and high pass-through rates of fossil fuel prices to electricity producer tariffs. Splitting these into two periods across 2006 shows that most of the alignment with electricity costs has occurred since 2006, with Armenia's pricing has come closer in line with costs. However the gas coefficient in Panel C in Georgia is both much lower than in Hungary, Romania and Armenia and statistically insignificant. Although producer prices from Albania, a country that derives about

Table 2.1: Pass-through Rates of Oil and Gas Prices on Electricity Tariffs

	ARM	GEO	HUN	POL	ROM	TUR	UKR
			Panel A: 2000–2011				
Gas	0.16	0.09	0.32**	0.07	0.29**	0.25	0.05
	(0.068)	(0.095)	(0.004)	(0.355)	(0.001)	(0.121)	(0.307)
Oil	-0.01	0.00	0.02***	0.01***	0.01	-0.01	0.01***
	(0.269)	(0.640)	(0.000)	(0.000)	(0.080)	(0.224)	(0.000)
			Panel B: 2000–2006				
Gas	0.23	0.02	0.46	0.27	0.11	-0.08	0.05
	(0.547)	(0.923)	(0.120)	(0.174)	(0.657)	(0.869)	(0.677)
Oil	-0.01	-0.01	-0.01	-0.00	-0.00	-0.03	-0.00
	(0.741)	(0.231)	(0.265)	(0.869)	(0.965)	(0.286)	(0.369)
			Panel C: 2007–2011				
Gas	0.22*	0.09	0.30	0.04	0.29*	0.29	0.05
	(0.040)	(0.138)	(0.057)	(0.751)	(0.039)	(0.234)	(0.388)
Oil	-0.01	0.01	0.03**	0.02*	0.01	-0.01	0.01**
	(0.223)	(0.128)	(0.008)	(0.020)	(0.203)	(0.549)	(0.007)

Source: Bank Staff estimates.
Notes: p-values in parentheses, * denotes significance at the 5% level, ** at the 1% level and *** at the 0.1% level. Panel A has 46 observations, Panel B has 26 and Panel C has 20, data are quarterly and all prices are in US dollars.

38 See Mishra, Montiel, & Spilimbergo, 2011.

39 For example, see Erdogdu, 2007, Bagdadioglu & Odyakmaz, 2009, and Zhang, 2011.

40 The formal equation used to separately estimate the pass-through rates for each country is: $yt = \alpha y_{t-1}+\beta x_{it}+\gamma z_{it}+\delta x_{it-1}+\vartheta z_{t-1}+\varepsilon_t$ where y is the change in electricity tariffs, x is the change in international crude oil prices, and z is the change in the European natural gas price. The data is indexed on a quarterly basis, all variables are measured is nominal US dollars, and the short-run effects estimated in Table are the estimates of β and γ. This methodology can also compute the long-term effect, which is defined as either $(\hat{\gamma}+\hat{\theta})/(1-\hat{\alpha})$ or $(\hat{\beta}+\hat{\delta})/(1-\hat{\alpha})$, however given the volatility of fossil fuel prices and the recent regulation in electricity markets, the short-run effect is of more interest.

95 percent of its electricity from hydropower, are not available, end-user prices do show statistically significant variation with fossil fuel prices (results not shown).

Although Georgia's electricity is largely based off hydropower, there is evidence to suggest that the pricing of electricity is not as affected by costs as in other countries. The 2006 events and the reforms in the electricity market increased tariffs as Georgia began facing market prices for natural gas. Since 2006 world natural gas prices have increased by twenty-five percent, however these changes have not been reflected in the end-user or producer prices, while the end-user electricity tariffs increased 88 percent within one year based off a spike in the price of natural gas faced by Georgia. In addition, the margins between end-user and producer tariffs have widened significantly, and with even a drop in transmission and collection losses, reconciling these components and bringing more transparency to the pricing of electricity, especially at the retail level is required.[41]

Overall Georgia has made impressive improvements in the reliability of its electricity supply and is just beginning to increase its electricity exports to Turkey, however there is room to improve the transparency of the pricing mechanism of end-user tariffs. The results from the 2008 Enterprise Survey indicated that electricity is a major obstacle and the analysis here suggests this is likely due to the increase and subsequent stickiness of prices from the events in 2006. The primary issue today is one of transparency of the pricing mechanism, with the stability and predictability of pricing important to support longer term investment. Benchmarking end-user tariffs and exploring the costs linkages to electricity tariffs, the analysis here indicates there is evidence that after the 2006 explosions and reforms, the 88 percent increase in electricity tariffs overshot the cost-basis of electricity production, and ever since prices have been upwardly-sticky and irresponsive to costs. Therefore, improving electricity pricing and lowering retail distribution margins will likely have strong effects on firm growth and allocative efficiency in Georgia.

Tax Rates

Although the firms in the 2007 and 2008 SME surveys report that high taxes are the third biggest obstacle, there is little evidence that tax rates in Georgia are too high. From 2004 onwards, the number of taxes in Georgia as well as tax rates have decreased and tax rates in Georgia are now amongst the lowest in the region. The number of taxes in Georgia has decreased from 21 in 2004 to just 6 in 2008, and tax levels have come down significantly. These are shown in table 2.2.[42] Even the top tax rates are lower than those in Central and Eastern Europe and much below those in Western Europe. Although the evidence from the firm level surveys suggests that tax rates need further policy attention, the data suggest that tax rates are extremely competitive in Georgia. Forbes ranks Georgia as the 4th Least Tax-Burdened Country behind Qatar, UAE

Table 2.2: 2009 Top Tax Rates in Georgia and Comparator Countries

	PIT	SC	CIT	VAT
Georgia	20.0	0	15.0	18.0
Central & E. Europe	22.2	35.2	16.6	19.2
Western Europe	44.6	33.7	26.7	19.8

Source: IMF Staff calculations.
Notes: PIT: Personal Income Tax, SC: Social Contribution, CIT: Corporate Income Tax, VAT: Value Added Tax

41 Transparency International have a much stronger view of electricity pricing in Georgia, which the data herein cannot test. Transparency International, 2008, while the EBRD also suggests that the energy regulator should have more autonomy (EBRD, 2010).

42 Data are from IMF, 2011.

and Hong Kong SAR, China.[43] Given Georgia's flat tax and broad base, the recent increase in tax compliance may indeed be the indirect reason why firms cite high taxes as a firm obstacle.[44]

2.5. Conclusion: the way forward

The analysis in this chapter indicates that productivity growth in Georgia could evolve along one of several paths depending on the choices that are made. On the one hand is the path of diminishing productivity growth over time as Georgia exhausts the low-hanging productivity spurt resulting from the reforms of recent years. Along this path, allocative efficiency continues to stagnate as more productive firms fail to gain increasing market share and firms fail to improve their productivity levels over their lifecycle. Firm growth and productivity continue to be constrained by high borrowing costs, inadequate worker skills, and inadequate electricity pricing mechanisms, while less productive firms find it more difficult to exit the market due to the complexity of closing a business. On the other hand is the path of reforms to improve allocative efficiency and productivity over the firm lifecycle. Along this path, the process of closing a business is streamlined so that resources are not stuck in unproductive uses and borrowing costs and lari spreads are reduced by improving confidence in the banking sector and inducing greater competition in the banking sector. Worker skills are improved by strengthening the vocational education system and improving overall education quality, while greater transparency in the mechanism of electricity pricing supports a move toward further cost-based pricing. Along this path, productivity growth is sustained over time, thus enabling Georgia to sustain rapid economic growth to move it toward upper middle income status over time.

43 Forbes, 2009.

44 The 2009 IFC Report on Sector Competitiveness in Georgia cites that there is a perception that the tax authorities are overly aggressive in levying taxes and penalties on those companies that are doing their best to comply. (World Bank, 2009)

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CHAPTER 3. EMPLOYMENT AND SKILLS

3.1. Introduction

Sustaining productivity growth in Georgia will require improving worker skills and making better use of its labor resources. In spite of the rapid economic growth of the last decade in Georgia, a large fraction of its workforce is either unemployed or engaged in low productivity activities in the agriculture and rural sectors. This problem has been made worse by the recent crisis. As some of the older sectors have faded and shed labor, some new sectors have emerged but are not able to fully absorb all of Georgia's workers. As a result, aggregate labor demand remains weak. At the same time, although the level of tertiary education in the labor force is high, firms complain about the lack of workers with requisite skills. The problem is compounded by the low share of vocational education in Georgia and the low quality of educational outcomes. Over the longer-run, Georgia confronts a shrinking workforce, due to an aging population and the total population will continue to decline over this period. This suggests that improving labor productivity will be important to compensate for a decrease in the size of the workforce. Furthermore, improving labor productivity will require moving workers from less productive to more productive activities. This shift in labor resources will require improving worker skills and better matching workers with available job opportunities.

Reforms to encourage movement of workers into more productive activities would support a pattern of growth that is more employment-generating and inclusive going forward. Encouraging growth of more productive and employment-generating tradable sectors will require sustaining the improvements to the business environment that have taken place in Georgia since 2004. At the same time, remaining constraints particularly relevant to tradables will need to be addressed. Furthermore, as argued more forcefully below, there remains a clear role for policies specific to labor markets—to promote labor force participation, to better match workers with available jobs, to help ensure the provision of relevant training and curriculum, and to ensure that government interventions do not create work disincentives. Together, such a package of reforms should support a pattern of growth that is more employment-generating and inclusive going forward than has been the case to date in Georgia.

In order to address the challenge of better employing labor resources, the analysis in this chapter puts forth the following policy options for consideration:

- Strengthen job matching services and provide career guidance to reduce search costs and alleviate labor market mismatches. This would facilitate employment of workers who are currently jobless but possess necessary skills.

- Reform the education sector to equip workers with skills that are in greater demand, particularly through strengthening vocational education, but also by improving the quality of education overall.

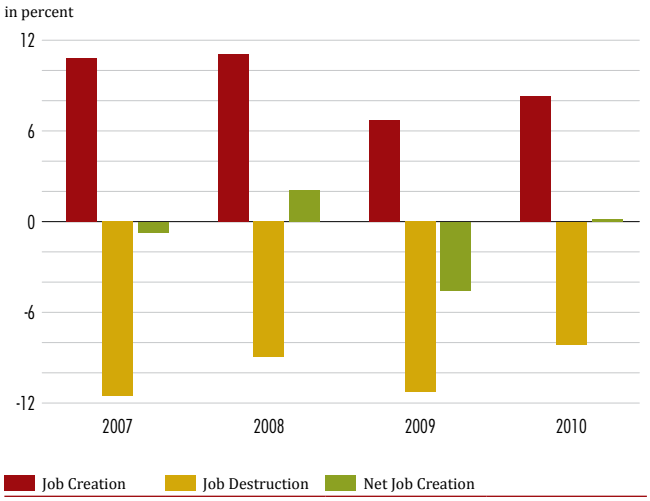
- Sustain and refocus business environment reforms to encourage entrepreneurship in and growth of the modern, more productive, tradable sectors.

The rest of the chapter is organized as follows. The next section reviews aggregate labor market developments since just before the crisis until 2011. The third section examines the skills mismatch issue in Georgia and compares it with other countries, as well as the labor market characteristics that may shed light on the nature of unemployment in Georgia. The chapter then examines entrepreneurship and skills to encourage productivity-enhancing labor reallocation. Finally, the chapter concludes with a reflection on a number of options to promote a fuller use of Georgia's human resources.

3.2. Recent Labor Market Developments

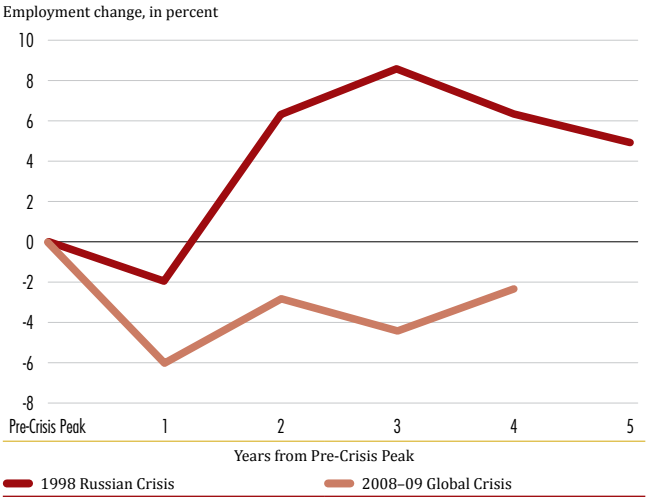
Georgia's pre-crisis economic boom failed to generate sufficient employment growth. In general, a labor market goes through several stages as it engages in enterprise restructuring. First, as older, less productive sectors contract and retrench their workers, the more productive modern sectors remain small, and net job destruction dominates. As the new sectors grow, the rate of job creation begins to offset the rate of job destruction and the economy approaches balanced job flows. As the new sectors expand further, net job creation dominates. In Georgia, because of intensive enterprise restructuring ahead of the crisis, job destruction in the public sector fully offset employment growth in the private sector, resulting in little or no net job creation. As a result unemployment levels remained relatively high during the pre-crisis period, despite sustained economic growth in Georgia. In contrast, where enterprise restricting took place much earlier, some countries in the ECA region (such as Poland) experienced sustained net job creation ahead of the crisis.

Figure 3.1: Job Destruction and Job Creation in Georgia



Source: Staff estimates using Geostat data.

Figure 3.2: Employment and Crisis in Georgia



Source: Staff estimates using Geostat data.

Starting at a relatively high level, the unemployment rate rose further at the beginning of the crisis and has fallen only marginally since then. As is clear in graph above, the economy experienced net job creation in 2009, as job destruction completely offset job creation. The rise in joblessness was broad-based, as unemployment increased proportionally across various demographic groups and across urban and rural areas. At 15 percent in 2011, Georgia's unemployment rate is currently among the highest in the ECA region, exceed only by unemployment rates in selected Western Balkan countries.

Table 3.1: Georgia: Key Labor Market Indicators, 2005–2011

in percent

	2005	2006	2007	2008	2009	2010	2011
			Labor Force Participation Rate				
All	64.0	62.2	63.3	62.6	63.6	64.2	65.2
Men	73.5	72.2	73.3	73.4	74.6	74.5	76.5
Women	55.9	53.6	55.0	53.5	54.3	55.5	55.8
			Unemployment Rate				
All	13.8	13.6	13.3	16.5	16.9	16.3	15.1
Men	14.8	15.2	13.9	16.8	18.1	17.9	16.7
Women	12.6	11.7	12.6	16.1	15.4	14.5	13.1
			Employment Rate				
All	55.2	53.8	54.9	52.3	52.9	53.8	55.4
Men	62.6	61.2	63.1	61.1	61.1	61.2	63.7
Women	48.8	47.4	48.1	44.9	45.9	47.5	48.5

Source: Geostat.

There are no clear sources yet of job creation in the incipient recovery period that can help alleviate joblessness. The near-term projections for job creation are not encouraging: The drivers of gross job creation and employment growth in the pre-crisis period—the construction and real estate and financial intermediation sectors—still face dampened prospects. Meanwhile, employment-generating exports and tradables have not yet begun to expand at a rapid rate.

More generally, employment recovery following the global financial crisis appears much weaker than previous recoveries. While employment levels recovered fairly rapidly two years after the onset of the Russian crisis, for example, employment levels are still far below their pre-global financial crisis level. There are of course important difference between the two crises. Although economic activity slowed down during the 1998 Russian crisis, notably in the agriculture and industrial sectors, the Georgian economy as a whole did not fall into a recession. In contrast, real GDP fell by about 4 percent during the last crisis. In addition, because of methodological changes introduced in the labor survey in 1998, the results of pre-crisis and post-crisis comparisons need to be interpreted with caution. Nonetheless, there is clearly some evidence of more rapid recovery in the previous crisis, highlighting the more complex challenges faced in the current environment. There is also some evidence that this sluggish recovery has affected several economies throughout the region, not just Georgia.

International migration has helped ease domestic labor market pressures but prospects for new deployment (or re-deployment) in the near-term are likely dim. In the past, overseas work served to ease some of the labor market pressures in Georgia—about two-thirds of migrant workers report themselves inactive or jobless (and looking for work) just before migration. Given the high rate of emigration—emigrants are about

a quarter of Georgia's population—overseas work has clearly been a key source of productive employment for Georgia's workforce. However, in the current period, the economic recovery in traditional host countries for Georgia's workers remains fragile. There is also anecdotal evidence of large waves of returnees, though more systematic evidence is necessary to verify this.

The welfare consequences are significant. The risk of falling into poverty is highest among households headed by an unemployed or discouraged worker. In general, this likelihood of falling into poverty has risen across the board, as poverty rates increased overall in 2010, in the economy's lagged response to the crisis. However, this increase in poverty occurred earlier, in 2009, among households with discouraged and unemployed heads.

3.3. Skills Mismatches in Georgia

This section examines dimensions of skills mismatches in Georgia's labor market.[45] A skills mismatch emerges when the skills and qualifications of the workforce do not correspond to the needs of the market. As recent studies have reported, there are no direct measures of skills demanded and supplied in Georgia's labor market. As an approximation, we use education and occupation to measure skills. The analysis in this section suggests that a traditional employment structure exists with limited needs for highly skilled workers alongside a large supply of workers with tertiary education. As a result, as explained more fully below, many highly-skilled workers become unemployed or are employed in occupations requiring lesser skills. At the same time, firms report their inability to find qualified workers, despite a large pool of unemployed workers. This suggests that despite their tertiary-level education, many workers do not possess employable skills.

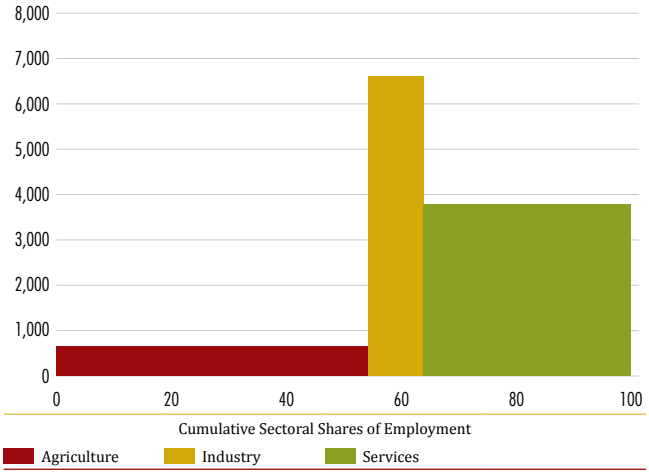
The employment structure in Georgia remains traditional. The agriculture sector accounts for about half of total employment. The industrial sector is small, representing only about 10 percent of employment. The rest (about 40 percent) is accounted for by the services sector. This contrasts considerably with the EU-10 countries, where industry (33 percent) and services (57 percent) account for most of employment. Within the services sector in Georgia, recent evidence also suggests that modern businesses and financial services, where productivity levels are generally higher, represent a miniscule share of employment. The public sector is fairly large, representing about 17 percent of total employment.

In sum, most jobs in Georgia are still in traditional sectors, and as a consequence, Georgia's labor resources are locked in low-productivity sectors requiring low skills. This is evident in the accompanying graph, where the horizontal axis represents the share of employment, and where the vertical axis represents productivity levels, as measured by value added per worker (in US dollars). The graph indicates that close to half of all workers are engaged in low-productivity work in the agriculture sector. In contrast, productivity levels are more evenly spread in the EU-10 and other countries. This employment structure is similar across various age groups, suggesting that the traditional character of Georgia's labor market is persistent. Younger workers are employed across sectors in similar proportions to older workers. In particular, comparing older and younger

45 This section draws on work by Jan Rutkowski, supplemented by recent and comparative data.

Figure 3.3: Georgia: Sectoral Employment and Productivity, 2004–09

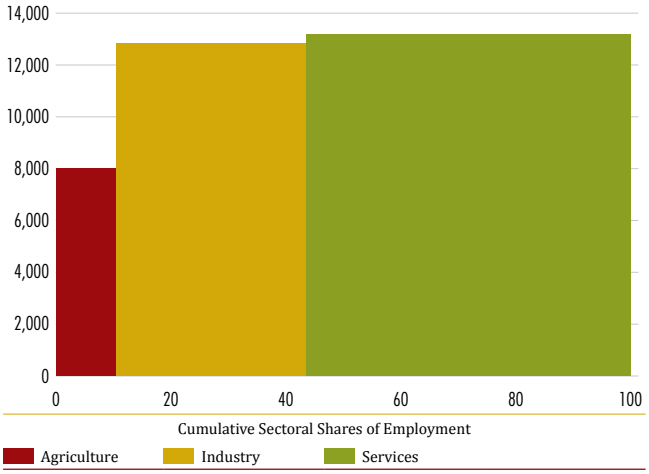
Value-added per worker, in constant dollars and in percent



Source: Staff estimates using WDI data.

Figure 3.4: EU10: Sectoral Employment and Productivity, 2004–09

Value-added per worker, in constant dollars and in percent



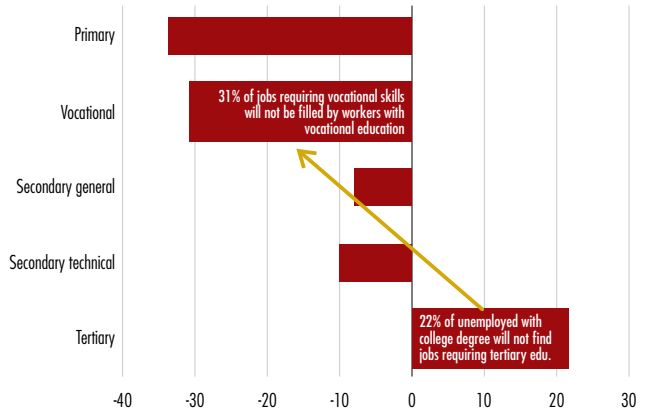
Source: Staff estimates using WDI data.

workers, the share of agriculture employment is roughly the same. There is slightly greater likelihood of being employed in financial services among younger workers, but the general shift from traditional to more modern sectors is generally limited. Because Georgia engaged in enterprise restricting only recently, as discussed in the previous section, the existence of a relatively small modern sector is not surprising.

The existing employment structure implies that few jobs require higher education, while there is a shortage of workers with vocational skills. There is weak demand for college graduates in the sectors employing the most number of workers, namely, agriculture and trade. Instead, the sectors and firms generating employment require no more than secondary or vocational education alone, as evidenced by the agriculture sector accounting for a large share of employed workers. A simple simulation from a recent analysis suggest that even if there

Figure 3.5: Labor surplus and shortage by education in Georgia

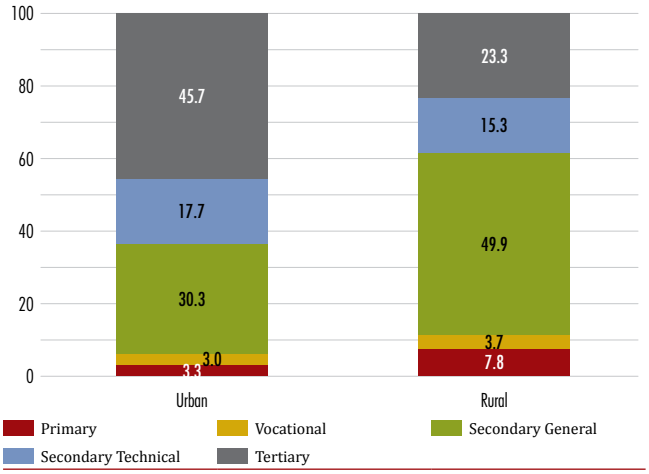
in percent



Source: Staff estimates using Geostat data.

Figure 3.6: Educational Structure of Unemployment in Georgia

in percent



Source: Staff estimates using Geostat data.

are enough job vacancies to employ all those workers currently unemployed, and if those new jobs require the same qualifications as existing jobs, a fifth of unemployed workers with tertiary education still will not find jobs. In contrast, there will not enough be enough workers with vocational degrees to fill new vacancies requiring vocational skills. A look at labor surplus or shortage by employment category indicates than 33 percent of jobs requiring vocational skills will not be filled by workers with vocational education, whereas 22 percent of workers with tertiary education will not find jobs requiring tertiary education.

Despite the general lack of jobs requiring tertiary education, Georgia's labor force is highly educated, with the consequence that many of Georgia's unemployed workers are highly educated. About a third of workers have tertiary education, which is higher than many other countries including high-income economies. Only about a tenth of workers have less than secondary education. Many of the most educated workers live in urban areas. Both the unemployment rate and underemployment rate are highest among those with tertiary education. In particular, in 2010, the unemployment rate was 22 percent among college graduate and 12.9 percent among primary school graduates. Workers with secondary technical education have 16.7 percent. In urban areas, every other unemployed worker has a college degree.

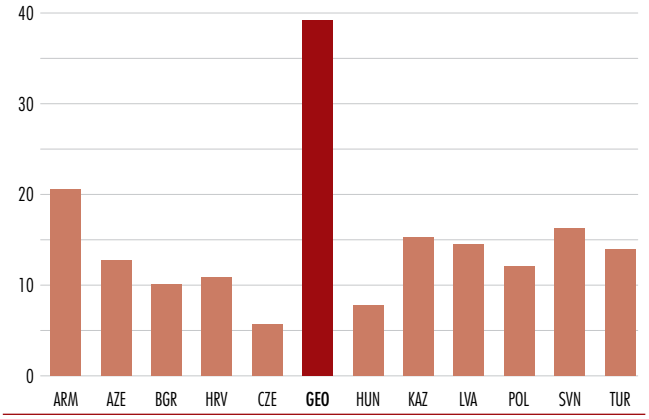
Meanwhile, to avoid joblessness, many workers with college education take on jobs that do not require high skills. Substantial fractions of college workers are employed as manual laborers and salespersons. Many are employed in the agriculture sector. As a result, such college educated workers generally earn much less than what they would normally earn as professional or managers, occupations which clearly require tertiary degrees. The wage penalty of being employed in sales, for example, can be as high as 25 percent for those with college degrees.

The existence of a large pool college-educated unemployed is in stark contrast to those of other countries in the ECA region. Along several dimensions, the unemployment profile is generally comparable to those of its neighbors: Unemployment in Georgia is primarily concentrated in urban areas (26.5 percent versus 6.5 percent in rural areas in 2011), more prevalent among younger workers (about a third of workers age 15 to 24), and slightly higher for men (about 16 percent versus 13 percent among women in 2011). However, many of Georgia's unemployed workers have tertiary education, more so than in other countries. In the graph above, using ILO data for 2008, the year for which comparable data exist across countries, Georgia's share of unemployed workers with tertiary educated is substantially higher than other countries in the region. On average, it is more than double the corresponding share in most countries.

Large disparities in unemployment across regions provide further evidence of structural mismatches. Regional unemployment rates currently vary from 9 percent (Samtskhe-Javakheti, Guria, Mtskheta-mtianeti) to 30 percent (Tbilisi). Some regions were disproportionately affected by the crisis—for example, unemployment doubled in Shida Kartli while increasing less sharply in other regions—but regional disparities have been largely persistent over the past decade, suggesting the inability of regional labor markets to adjust.

Figure 3.7: Unemployed workers with tertiary education

in percent of all unemployed workers



Source: KILM.

Not surprisingly, long-term unemployment is prevalent. Recent evidence suggests that about two-thirds of unemployed workers have been jobless for at least a year. In contrast, only about 5 percent of the unemployed have been jobless for less than a month. The incidence of long-term unemployment is highest among college graduates. About 70 percent of unemployed workers with tertiary education are long-term unemployed workers.

Together with regional labor market disparities, long-term unemployment may be due, in part, to the limited movement of workers to where the jobs are. Recent evidence from the second wave of the *Life in Transition Survey* (2010) indicates that about half of Georgia's population has lived in the same community since birth. Although this is not surprising by ECA regional standards, but in an economy characterized by high unemployment and persistent regional labor market disparities, this may be a concern and may be restricting the ability of the economy to adjust and allocate labor market resources toward their more efficient use. It is not immediately clear what could be holding back internal labor mobility—whether, as in other ECA countries, it is the lack of transport infrastructure to facilitate commuting, the absence of rental housing markets to ease inter-regional migration, or the limited portability of skills (both nominal portability—the formal recognition of credentials—as well as the employability of skills themselves, as workers move from one sector to another).

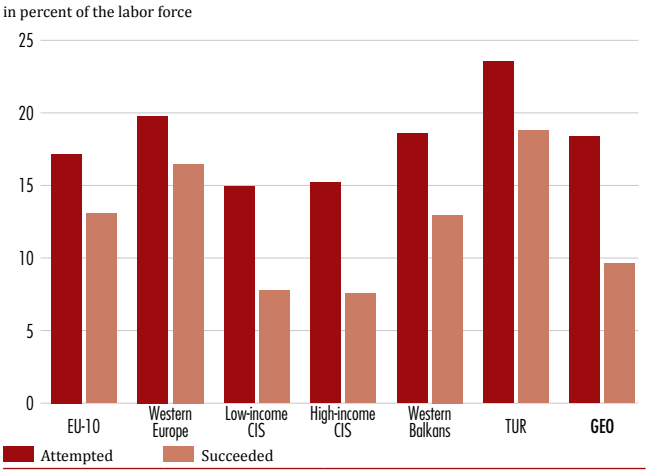
3.4. Entrepreneurship and Skills

The emergence and growth of firms in more productive, tradable sectors could create demand for Georgia's abundant workers with tertiary education. Georgia had just reached the state of "balanced job flows" on the eve of the crisis—when job destruction and labor shedding in older sectors were proportionally offset by job creation in the new sector—as it carried out intensive enterprise restricting much later than other countries in the region. As the economy recovers, Georgia will eventually see the benefits of its restructuring efforts but it needs to sustain such efforts and ensure that there are no reversals.

Not surprisingly, the global financial crisis curtailed entrepreneurial activities. Entrepreneurship is of course a difficult concept to measure, as it combines notions of innovation and risk-taking. Notwithstanding measurement issue, it is typically approximated by the number of business start-ups. In Georgia, new business registration of course dropped in 2009 as a result of the crisis, along with other economies in the region, after experiencing double-digit growth during the pre-crisis boom.[46]

The scale of successful business start-ups in Georgia suggests that there is room for improving

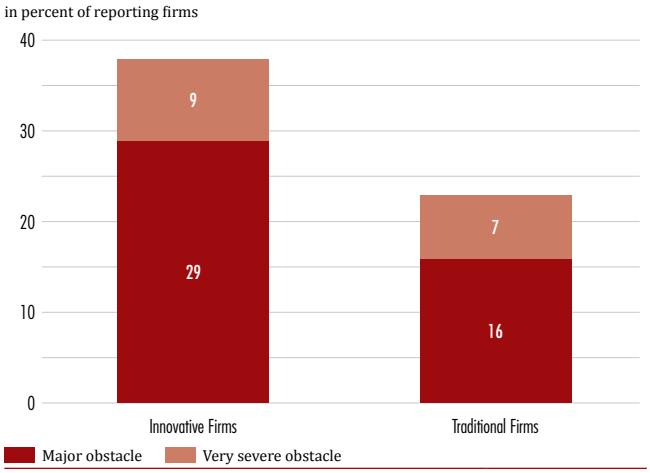
Figure 3.8: Business Start-Ups



Source: Survey data.

46 This is based on the World Bank's Entrepreneurship Survey.

Figure 3.9: Workforce Education as an Obstacle to Firm Activity

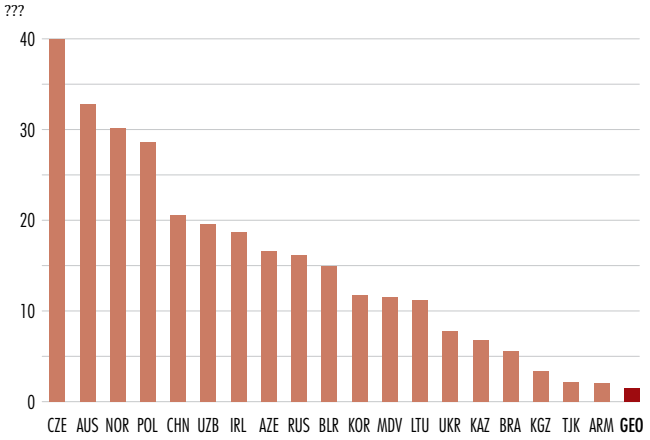


Source: Rutkowski (2012).

the business environment. Georgia, following its regulatory reforms, now ranks among the best in the region in creating an environment that welcomes entrepreneurial ventures. The results of ongoing analysis of data from the *Life in Transition Survey* (2010) suggest that the number of business start-ups in Georgia compares very favorably with those of countries in the ECA region, as well as some high-income economies in Europe. Nearly 20 percent of the labor force report themselves as having taken steps to open a business. However, of those who attempt to start a business, only about half succeed in doing so. In contrast, about two-thirds of those who attempt to start a business in other countries manage to succeed, on average. The results of the econometric analysis of such start-ups suggest that access to finance is a very strong predictor of successful start-ups, controlling for various demographic, socio-economic, and attitudinal characteristics. A recent report analyzes the institutional constraints facing small enterprises.[47]

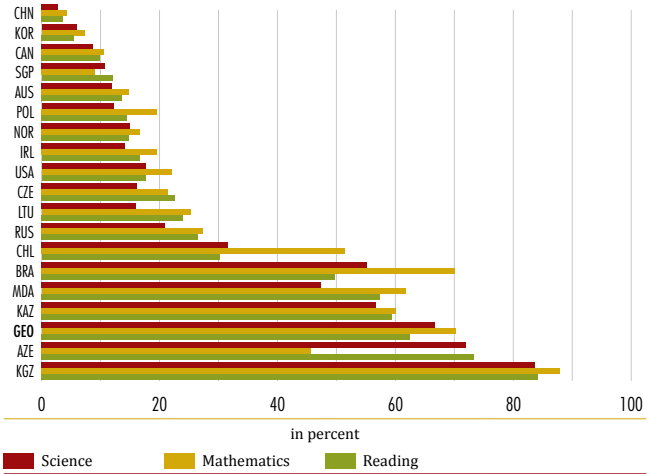
The few modern firms that do exist, meanwhile, also still confront skills constraints. Although the existence of a large pool of jobless college graduates would suggest that modern firms should be able to find workers with appropriate skills, in fact, some Georgian firms still report that finding workers with the right skills is difficult. While it is not unusual for firms to complain about the skills of the labor force, in general, the relative importance of skills along at least two dimensions suggest that the complaint may be valid, at least for selected firms: First, during the pre-crisis boom and following a series of successful regulatory reforms, firms still complained about the education

Figure 3.10: Share of students in VET tracks in secondary education (2010 or latest data)



Source: UNESCO Institute for Statistics and EdStats.

Figure 3.11: Share of functional illiteracy (below level 2 on PISA)



Source: PISA 2009 and OECD.

47 See also Rudaz (2012). He suggests that entrepreneurial activity may reflect survival strategies rather than business start-ups. He also presents the barriers faced by smaller enterprises.

of the workforce much more than labor regulations, as obstacles to their operations. Second, as illustrated in the accompanying graph, innovative firms, as measured by whether or not they have been introducing new products and services in recent years, complain more about the lack of skills than traditional firms. In general, we expect innovative firms to require more skilled workers able to adapt to changing technologies. Their complaint about skills can thus be seen as a useful indicator of skills. Close to 40 percent of such firms see inadequate skills as an obstacle, compared to only about 23 percent among traditional firms.

The low share of students in vocational tracks and the high rate of functional illiteracy suggest that Georgia's education system has considerable room to improve to respond to the skills needs of firms in the economy. The quality of general education is a major concern in Georgia. Learning outcomes, measured by international student assessments, fall behind most other countries even after controlling for GDP per capita. The share of functional illiteracy (scores below level 2 on each of PISA scales) is very high. Furthermore, the share of VET tracks in secondary education in Georgia is among the lowest among ECA and other comparator countries. The existence of a large pool of college graduates that cannot be employed by modern firms suggests that workers may possess the requisite diploma but may not necessarily have the specific skills actually required by the modern sector.

The provision of vocational education will need to be closely connected to the needs of firms and further work in needed on the architecture of the system. The analysis of skills shortages as well as the sector studies on wine and apparel in the appendix point toward the importance of VET and that its provision will need to be closely connected to the needs of firms. Further work is needed on the mechanism and financing of VET provision and this is being done in the context of the Skills Study and the next public expenditure review (PER) for Georgia. The role of public private partnerships in this regard will need to be explored in particular.

3.5. The Role of Policy

The government will need to sustain and refocus its business environment reforms. Just a few years ago, the policy implications would have been straightforward to encourage reallocation and growth of more productive firms. On the labor demand side, promoting job creation would have required upgrading the business environment, reinforcing the institutions of a market economy and reducing regulatory uncertainty. In recent years, however, Georgia has achieved enormous improvements in its business environment and is held as an exemplary reformer in the region and its labor market is also thought to be flexible. On the other hand, it will be important to sustain and refocus the business environment reforms to address the remaining constraints facing firms in more productive and tradable sectors. These reforms are discussed in chapters 2 and 4 of this report.

On the labor supply side, although options to promote labor force participation are limited with a shrinking working-age population, better matching services can encourage shifts of workers into more productive activities. Labor force participation among men in Georgia already compares very favorably to those of other economies in the ECA (74 percent, versus 69 percent in ECA), leaving little room for expansion. Labor force participation among women (55 percent) is much lower, and thus may allow more scope for labor accumulation, but also compares well with the ECA average (51 percent). Retirement ages are 60 and 65 for

women and men, respectively, which again compare favorably with Georgia's immediate neighbors. There is some scope for increasing labor force participation by equalizing retirement ages, but this will be need to be done gradually and the cumulative gains will probably be modest. In this context, strengthening job matching services and providing career guidance to workers can reduce search costs and improve matching in the labor market. This would facilitate employment of workers who are currently jobless but possess necessary skills.

There is no evidence to date that transfers create work disincentives. In principle, government transfers may be sufficiently generous to discourage work or job search, thus possibly explaining persistent unemployment. Georgia's Targeted Social Assistance (TSA) program, for example, provides benefits accounting for over a third of recipients' average consumption. However, all the analyses to date—in the form of systematic comparisons of labor market characteristics of social assistance recipients and non-recipients near the eligibility threshold—do not indicate any work disincentives due to TSA. This of course needs to be monitored regularly to ensure that as the social assistance program expands in scope or increases its benefits, no work disincentives are created.

Reforms in the education sector are one of the greatest needs in order to equip workers with the skills that are most relevant in today's workforce. In recent years, the Parliament has passed legislation to reform higher education (2003), general education (2004), and vocational education (2007). A new accreditation process was instituted in 2006 to ensure high-quality tertiary education. Teacher training and retraining accreditation procedures are being developed, alongside other reforms in the education system. It remains to be seen whether these reforms are delivering higher-quality education. The evidence to date suggests that the returns to education acquired in the post-Soviet era are lower than returns to education acquired in the Soviet period, holding other things constant, suggesting that the labor market does not yet sufficiently value post-Soviet education. Raising the share of vocational education and improving overall educational quality are important priorities in reforming the education sector in Georgia.

3.6. Conclusion

The analysis in this chapter indicates that labor market outcomes in Georgia can move forward along one of several paths depending on the choices that are made. On the one hand is the path of continued large segments of the labor force remaining unemployed or employed in low-productivity activities. This path would be characterized by continued limited provision of vocational education and training and limited improvement in overall education quality, while numbers of workers with tertiary education find themselves with poor employment prospects. Skill mismatches and overall poor education quality would continue to constrain movement of workers into more productive activities. On the other hand is the path of greater employment generation and productivity-enhancing movement of workers from less to more productive activities. With a strengthened vocational education system, more productive firms would be able to more readily locate and hire workers with requisite skills. Improved job matching services would reduce search costs and facilitate labor mobility. Further improvements to the business environment would address constraints facing more productive firms in the tradable sectors. Such a path would ensure that growth in Georgia going forward would be more socially inclusive than it has been to date.

CHAPTER 4. EXPORTS

4.1. Introduction

Georgia's export performance over the last decade indicates that exports and tradables have not served as a leading source of rapid and sustainable productivity growth. Although merchandise exports have grown by about 10 percent per year over the last decade, the export share of GDP has not changed much since 2004 and remains below that of other high growth smaller economies. The commodity structure of Georgia's exports has also not changed much over the last decade, with resource-based products such as metals and minerals still dominant, while employment-generating processed products remain secondary. The one big change in Georgia's exports has been the reorientation away from the Russian market after 2005. Unlike economies in Central and Eastern Europe, however, Georgia has not yet demonstrated success in tapping into vertically integrated international production networks. The quality and sophistication of its export basket has also not evolved much over the last decade and the survival probability of Georgia's entry into new export markets is considerably below that of other countries in the ECA region. Exports of services have grown at a faster rate, although this has been dominated by transport and tourism receipts, unlike other ECA countries that have also managed to tap into the markets for information technology and other business services.

Generating high and sustained productivity growth will require taking advantage of global markets to expand Georgia's exports. The World Bank's Commission on Growth and Development found that since 1950, only 13 economies have grown at an average rate of 7 percent or more for 25 years or longer.[48] At this pace of expansion, an economy doubles in size every decade. The Growth Commission's report finds that all 13 success stories took advantage of global markets in two ways: first, by importing knowledge and technology; and second, by exploiting global demand to expand the exports. Georgia has already made considerable progress in liberalizing its trade and improving its business environment. The two foregoing chapters explored policies that could have an impact on improving productivity and employment in domestic supply generally. This chapter explores policies that could have an impact in improving exporting prospects in Georgia.

In order to address the challenge of improving export prospects, the analysis in this chapter puts forth the following policy options for consideration:

48 The 13 economies include Botswana, Brazil, China, Hong Kong SAR, China, Indonesia, Japan, South Korea, Malaysia, Malta, Oman, Singapore, Taiwan, China, and Thailand. India and Vietnam may be on course to join these 13 economies. While growth in some of these countries has moderated as they have reached upper middle income levels, strong growth sustained over an extended period is what delivered them to the substantially higher income levels.

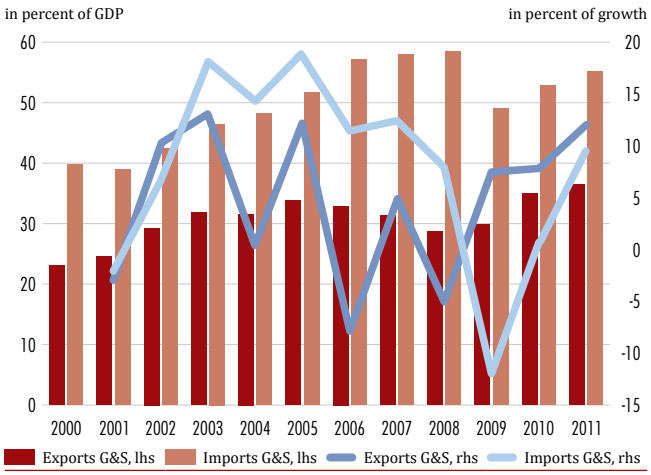
- Address persistent overvaluation of the real exchange rate by using periods of market stability to build international reserves.
- Continue to pursue trade-related reforms to facilitate Georgia's exports to the European Union and other international markets.
- Further improve Georgia's trade and logistics infrastructure to the levels of those of leading middle income country comparators and also improve internal infrastructure to better connect secondary and rural areas to international markets.

The rest of the chapter is organized as follows. The next section explores the commodity and market structure of Georgia's merchandise exports and looks at how this has evolved over the last decade. The third section examines how the sophistication of Georgia's exports has evolved over time and also examines how successful exports have been in sustaining exports to new destinations. The focus in these two sections is mostly on merchandise exports, although the export of services is also examined. The fourth section considers the trade-related policies that have been implemented to date as well as policy areas in which further progress is necessary.

4.2. Export Structure and Its Evolution

Georgia's exports expanded over the last decade, although imports expanded at a faster rate while the export share of GDP has not increased much since 2004. Export volumes grew by about 5 percent per year during 2001–11, while import volumes grew by about 8 percent over the same period (figure 4.1). Import growth overtook export growth during the boom years of 2003–07 as large capital inflows and credit growth fueled rapid expansion of imports. During the economic downturn of 2009, as capital inflows collapsed and the economy experienced a sharp adjustment in its external balances, import growth collapsed before picking up again in 2011–12. During 2009–10, the growth of export volumes actually exceeded that of imports. The export share of GDP actually increased during the first half of the last decade from 23 percent in 2000 to 32 percent in 2003 and then remained stagnant at that level during the boom years of 2004–07. The export share declined during the economic downturn before rebounding to around 36 percent in 2010–11.

Figure 4.1: Exports and Imports of Goods and Services in Georgia



Source: WDI and WEO, based on Geostat data.

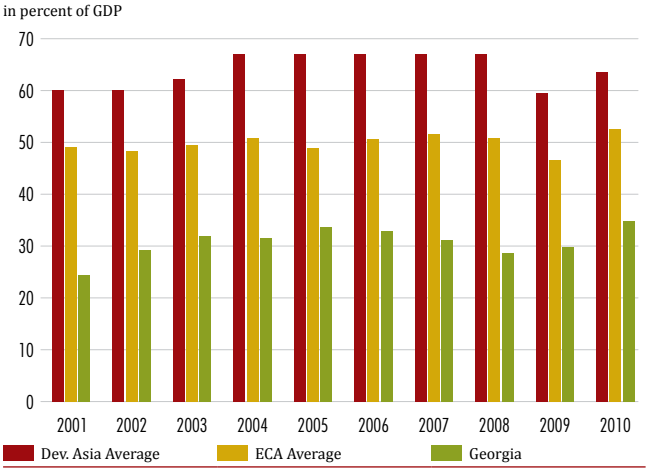
Exports have played a much smaller role in driving growth in Georgia during the last decade than in regional and global comparators. Between 2004 and 2007, Georgia experienced faster growth than average growth for both the ECA region and Developing Asia (figure 4.2). On the other hand, the export share of GDP in Georgia was considerably lower than both non-oil

ECA countries and Developing Asia (figure 4.3).[49] For example, during 2004–07, GDP growth averaged 6.5 percent in Bulgaria, 7.6 percent in the Slovak Republic, 5.3 percent in Thailand, and 8.2 percent in Vietnam, compared to 9.3 percent in Georgia. On the other hand, the export share of GDP averaged 52 percent in Bulgaria, 81 percent in the Slovak Republic, 73 percent in Thailand, and 71 percent in Vietnam, compared to 32 percent in Georgia. These figures suggest that exports played a smaller role in driving rapid economic growth in Georgia during the boom years compared to other countries in the ECA region or Developing Asia.

Figure 4.2: GDP Growth in Non-oil ECA and Developing Asia

Source: WDI and staff estimates.

Figure 4.3: Export share of GDP in Non-oil ECA and Developing Asia



Source: WDI and staff estimates.

The commodity structure of Georgia's exports has not changed much over the last decade, with resource-based products such as metals and minerals still dominant. Georgia's merchandise export basket has been dominated by metals and minerals over the last decade (table 4.1). These include primarily scrap metal, other ferrous materials, copper, gold, and precious stones. Together, metals and minerals accounted for 61 percent of merchandise exports in 2000–01, which increased further to 66 percent in 2010–11. Chemicals (mainly fertilizer) accounted for another 5.4 percent in 2001–11, and increased further to 8.1 percent in 2010–11. Thus, the dependence of the merchandise export basket on resource-based products with limited employment generation has actually increased over time. On the other hand, the share of more processed, employment generating products has actually declined over the course of the last decade. For example, the share of food products (including wine, mineral waters, fruits, and nuts) declined from 16.6 percent in 2001–01 to 11.4 percent in 2010–11.

The commodity structure of Georgia's merchandise exports differs somewhat depending on whether one uses data from COMTRADE or Geostat. The latter includes the considerable increase in exports of used cars to neighboring countries, mostly Azerbaijan, Armenia, and Kazakhstan (see figure 4.4). These used cars are imported from other countries (mainly from Germany), with a small portion being reconditioned and refurbished in Georgia before being re-exported. While there is some local value added in such refurbishing activity, the bulk of these exports should more properly be considered re-exports, which is the case in the COMTRADE data. For the bulk of

49 Developing Asia includes Indonesia, Thailand, Hong Kong SAR, China, Philippines, Taiwan, China, South Korea, Malaysia, Singapore, India, Vietnam, and China. Averages are unweighted.

Table 4.1: Commodity Structure of Georgia's Merchandise Exports

in dollars and in percent

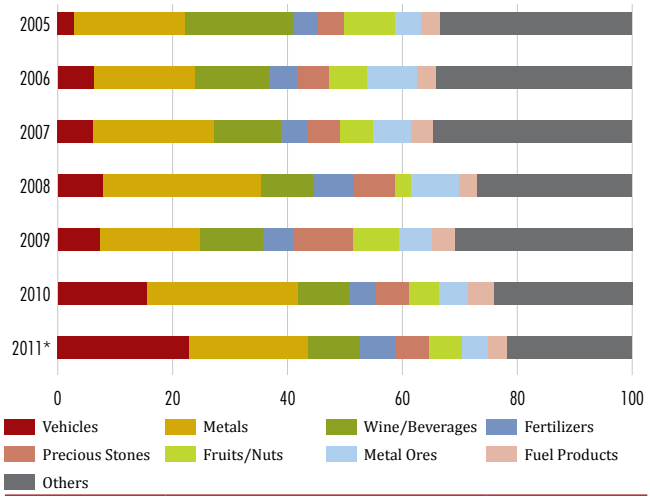
	Average 2000/01			Average 2010/11			
Sector	**Exports**	**% of total**	**RCA**	**Exports**	**% of total**	**RCA**	**CAGR (%)**
01-05 Animal	10,310	1.3%	0.61	26,432	0.9%	0.51	9.9%
06-15 Vegetable	47,604	6.0%	2.22	142,159	4.9%	1.6	11.6%
16-24 Foodstuffs	73,238	9.3%	3.2	162,271	5.6%	1.91	8.3%
25-27 Minerals	351,834	44.5%	3.98	1,272,078	44.1%	2.26	13.7%
28-38 Chemicals	42,559	5.4%	0.65	234,041	8.1%	0.86	18.6%
39-40 Plastic / Rubber	6,767	0.9%	0.21	10,222	0.4%	0.08	4.2%
41-43 Hides, Skins	2,974	0.4%	0.44	4,397	0.2%	0.26	4.0%
44-49 Wood	25,348	3.2%	0.86	25,574	0.9%	0.36	0.1%
50-63 Textiles, Clothing	9,753	1.2%	0.21	46,992	1.6%	0.41	17.0%
64-67 Footwear	1,441	0.2%	0.18	1,181	0.0%	0.05	-2.0%
68-71 Stone / Glass	16,881	2.1%	0.69	127,905	4.4%	1.24	22.4%
72-83 Metals	130,313	16.5%	2.56	627,770	21.8%	2.91	17.0%
84-85 Mach/Elec	56,864	7.2%	0.24	123,797	4.3%	0.17	8.1%
86-89 Transportation	5,754	0.7%	0.07	52,013	1.8%	0.21	24.6%
90-97 Miscellaneous	8,791	1.1%	0.18	27,332	0.9%	0.17	12.0%

Source: WB staff estimates using COMTRADE data.

these re-exports, any local value-added has more to do with transport and logistics, with Georgia becoming a major regional marketplace for automobiles.

Figure 4.4: Commodity Structure of Merchandise Exports including Automobile Re-exports

in percent of total

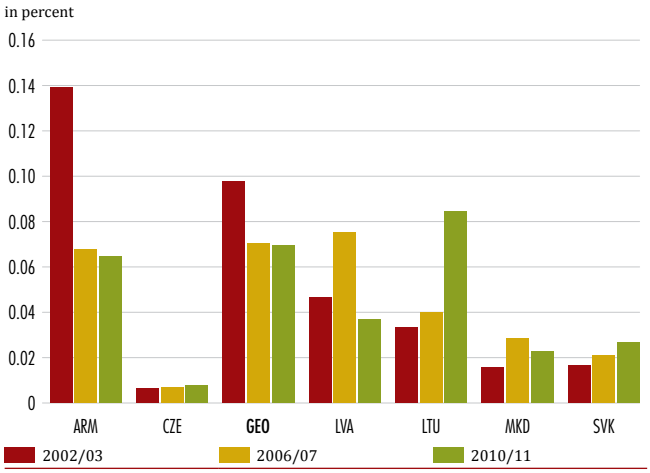


Source: Geostat and WB staff estimates.

The concentration of Georgia's export basket has not changed much over the last decade and is similar to that of Armenia, but higher than that of most Central and Eastern European countries. Looking at the export basket at the 6-digit level of disaggregation of the HS classification, the reliance on the top five products has remained relatively unchanged over the last decade. The top five exported products accounted for 52.8 percent of total export revenue in 2000 01 and 54.1 percent in 2010 11. Using the Herfindahl Index of export basket concentration, its evolution is reported along with that for comparator countries in figure 4.5. Georgia's degree of concentration along the product dimension as measured by the Herfindahl index is in line with that of Armenia, a country with a similar level of development as Georgia, and even with that of Lithuania, whose per capita income is substantially higher than Georgia's. However, Georgia's degree of concentration is higher than most other countries in Central and Eastern Europe, including Macedonia, the Czech Republic, Slovak Republic, and Latvia.

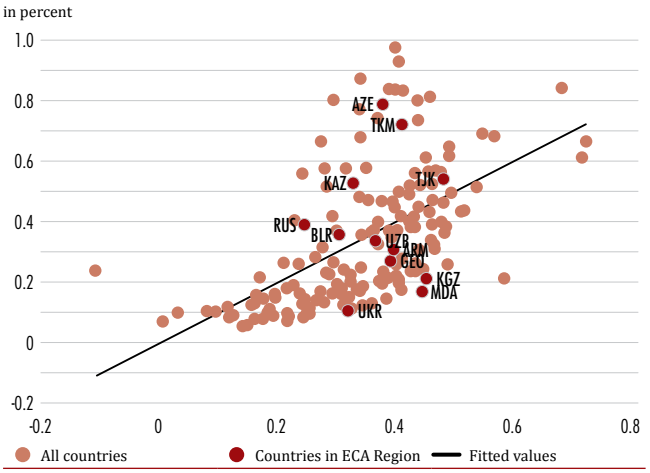
Georgia's level of export diversification is in line with what would be predicted by its endowments of natural resources, its level of development, and its size. In order to assess the diversification of Georgia's

Figure 4.5: Herfindahl Index of Merchandise Export Concentration



Source: Staff estimates based on COMTRADE data.

Figure 4.6: (Root) Herfindahl Index Against Model Prediction



Source: Staff estimates based on COMTRADE data.

export basket, it is important to put it into perspective, by comparing it with that of other countries with similar characteristics. For this purpose, using data for 171 countries over the period 2000–2011, a model is estimated linking the Herfindahl Index with an indicator of resource abundance, the level of economic development as measured by the log of GDP per capita, and the size of the labor force. Figure 4.6 shows the scatter plot between the predicted and the actual concentration of the export bundle, and it is possible to see that Georgia's concentration index is slightly below the prediction.

Table 4.2: Destination of Georgia's Merchandise Exports

in percent of total

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Azerbaijan	6.2	3.1	8.4	3.6	3.9	9.6	9.5	11.2	13.6	14.6	15.3	19.5	26.4
Armenia	4.2	3.9	5.8	6.7	8.4	4.6	7.9	9.0	8.3	7.8	9.9	10.2	11.0
Ukraine	3.4	3.6	3.7	6.5	2.4	4.3	6.1	7.6	9.0	7.4	6.6	6.5	7.0
Russia	20.7	23.2	17.7	18.2	16.2	17.8	8.1	3.7	2.0	1.9	2.1	1.7	1.9
Other CIS	5.0	11.4	13.1	13.8	19.7	10.8	10.3	6.0	3.3	5.0	6.5	10.3	6.1
Bulgaria	0.7	0.2	0.0	0.0	2.4	5.0	6.6	4.8	7.2	7.3	4.0	4.3	2.9
Other EU Countries	23.6	19.4	18.3	17.9	17.4	20.1	17.4	17.0	15.2	13.7	14.5	15.1	11.9
United States	2.2	2.8	3.9	3.3	3.3	3.1	6.2	12.1	6.8	3.3	11.2	6.6	9.5
Turkey	23.0	22.0	15.5	17.9	18.3	14.1	13.2	13.9	17.6	19.9	12.9	10.4	6.0
Canada	0.0	0.0	0.0	0.0	0.6	4.1	5.2	5.7	8.8	10.3	7.1	5.2	4.4
Other Countries	10.9	10.2	13.5	12.1	7.3	6.6	9.5	9.0	8.2	8.8	10.0	10.3	12.8

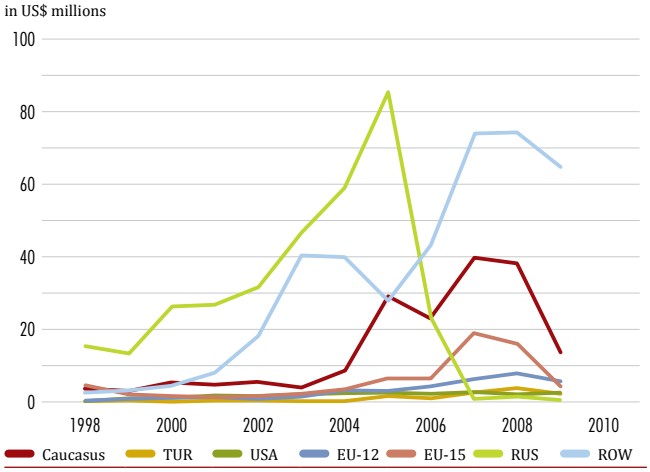
Source: WB staff estimates using COMTRADE data.

The one big change in Georgia's export structure over the past decade has been the reorientation away from the Russian market after 2005. During 2000–05, the share of Georgia's exports going to Russia averaged 19 percent. This fell to 8 percent in 2006 and 2 percent by 2008, due to the trade embargo imposed by Russia on Georgia after 2006 and the subsequent break in diplomatic relations after the August 2008 war. Most of the reorientation was toward Georgia's immediate CIS neighbors, with the share of exports going to Azerbaijan, Armenia, and Ukraine increasing from about 15 percent during 2000–05 to 36 percent in 2011. If re-exported

products are excluded, the degree of re-orientation toward immediate neighbors (Azerbaijan and Armenia) is less. Instead, the exports appear to have reoriented toward Ukraine, the United States, and Canada. The share of exports going to the United States increased from about 3 percent during 2000 05 to about 9 percent during 2010–12, while the share going to Canada increased from almost nothing during 2000–05 to 5.5 percent during 2010–12.

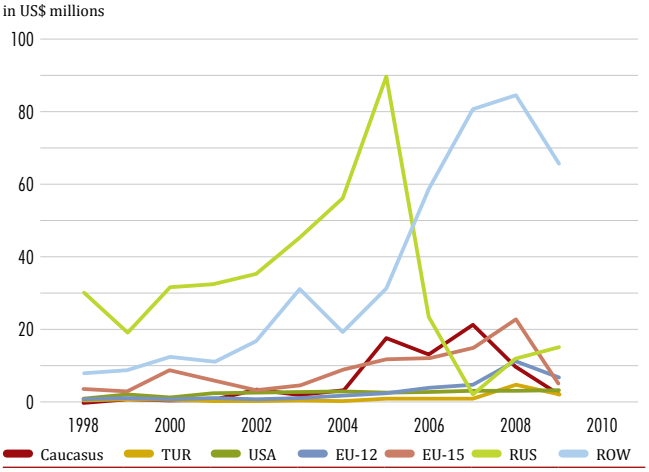
In spite of the large size and proximity of the EU and Turkish markets, Georgia's exports to both destinations appear significantly below potential. Overall, the share of Georgia's exports going to the European Union has remained fairly stagnant at about 20 percent over the last decade (19.6 percent in 2001 compared to 19.4 percent in 2011). The EU country receiving the largest share of Georgia's exports in 2011 was Bulgaria with 4.3 percent. This suggests that the large EU market remains a largely untapped potential for Georgia. The share of exports going to Turkey appears to have declined somewhat over the past decade, from an average of 18.5 percent during 2000–05 to about 10 percent during 2010–12. This suggests an untapped potential of connecting to the growing international production network in one of Georgia's immediate neighbors.

Figure 4.7: Destination of Processed Food Exports, 1998–2009



Source: Staff estimates based on COMTRADE data.

Figure 4.8: Destination of Processed Food Exports, Mirror Data, 1998–2009



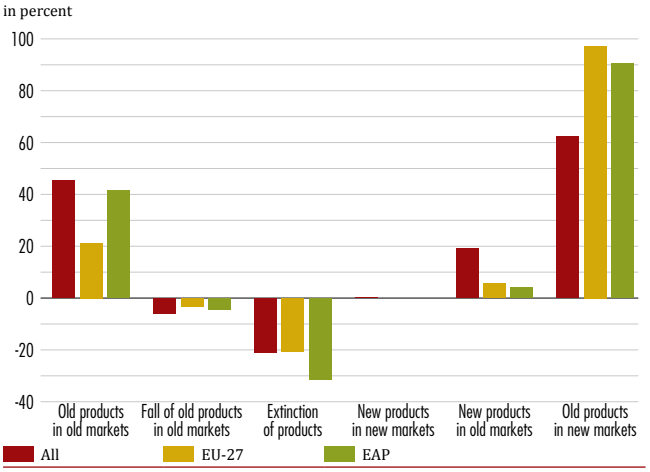
Source: Staff estimates based on COMTRADE data.

Processed food exports are an interesting example of the reorientation of exports from Russia toward the Caucasus, Ukraine, and other countries. Processed food exports constitute primarily wines, spirits, mineral waters, fruits, and nuts. Total processed food exports to Russia declined sharply after Russia imposed a ban on wines and mineral water from Georgia in 2006. Most of these exports were redirected to Ukraine, the Caucasus, and other transition countries. Interestingly, according to the Russian trade records (that is, Georgian export data that is mirrored in Russian imports records), Georgia's exports to Russia picked up slightly after 2007. This suggests that some of the demand for Georgian processed food among Russians could have been met by being routed through third countries.

Overall, a good summary visual of the sources of export growth during 2000–2010 can be obtained by a decomposition of export growth along the intensive and extensive margins. This decomposition shows the portion of export growth explained by increased sales of the same products to the same markets (intensive margin), and the portion explained by increased sales of the same products to new markets, new products to

the same markets, or new products to new markets (extensive margin). Figure 4.9 shows this decomposition for total export growth, and for export growth with the European Union (EU-27) and with countries in the East Asia Pacific region (EAP). Most of export growth is associated with the growth of old products into new markets (about 60 percent) and this can be understood from the fact that the single largest change in Georgia's export structure over the last decade has been the reorientation away from Russia toward other markets. The role of new products, however, appears to have been minor. Typically, smaller economies like Georgia, with diversification opportunities yet untapped, tend to display higher growth at the extensive margin than larger economies that have already diversified extensively. In this regard, Georgia's diversification has mostly been along the market dimension rather than the product dimension. Interestingly, extinction of products (that is, products that stop being exported by Georgia to any destination) are relatively high with the EAP region, which may be hinting at difficulties that exporters may have in sustaining export flows to altogether new destination.

Figure 4.9: Decomposition of Export Growth along the Extensive and Intensive Margins



Source: Staff estimates based on COMTRADE data.

Exports of services have grown at a faster rate than merchandise exports, although this has been dominated by transport and tourism receipts. Services exports reached almost two billion USD in 2011, and have grown since 2002 at an average rate of 19.3 percent. Particular subsectors, such as tourism and travel, grew at 25 percent per year, positioning itself as the most important service export in Georgia. Table 5 shows the sectoral composition of services exports for Georgia and a number of comparator countries, both for the period

Table 4.3: Sectoral Composition of Exports of Services (Share in Total of Exports of Services)

in percent

	Average 2001–2002						Average 2010–2011					
	ARM	**CZE**	**GEO**	**LVA**	**LTU**	**SVK**	**ARM**	**CZE**	**GEO**	**LVA**	**LTU**	**SVK**
Transport	38	23	49	64	45	39	22	24	42	50	59	31
Travel	36	43	32	12	34	30	55	34	45	17	25	38
Other	27	34	19	25	21	31	24	42	14	33	16	30
of which												
Communications	11	3	4	2	3	2	7	2	2	2	2	2
Construction	2	2	0	1	2	2	1	4	1	2	2	3
Insurance	3	0	2	1	1	0	2	1	2	1	0	1
Financial services	1	3	2	4	1	2	1	0	1	7	1	1
Computer and information	5	2	0	2	2	3	8	7	0	4	1	7
Royalties and license fees	0	1	1	0	0	1	0	0	0	0	0	0
Other business services	0	21	0	13	11	18	0	26	3	16	8	14
Pers., cultural and recreation	1	2	0	0	1	2	2	1	1	0	0	2
Government services n.i.e.	4	1	10	1	1	1	2	0	5	1	1	0

Source: UNCTADSTAT.

2001–2002 and for the period 2010–2011. In all cases, transport and tourism/travel account for the largest share of services exports, although that share tends to fall as the level of development increases. While in Georgia, over the period 2010–2011, travel and transport accounted for 87 percent of total services exports, in Czech Republic, they accounted for 58 percent, with other business services reaching 26 percent of total exports. Perhaps not unexpectedly, Georgia has not yet begun to emulate other ECA countries that have managed to tap into the markets for information technology and other business services.

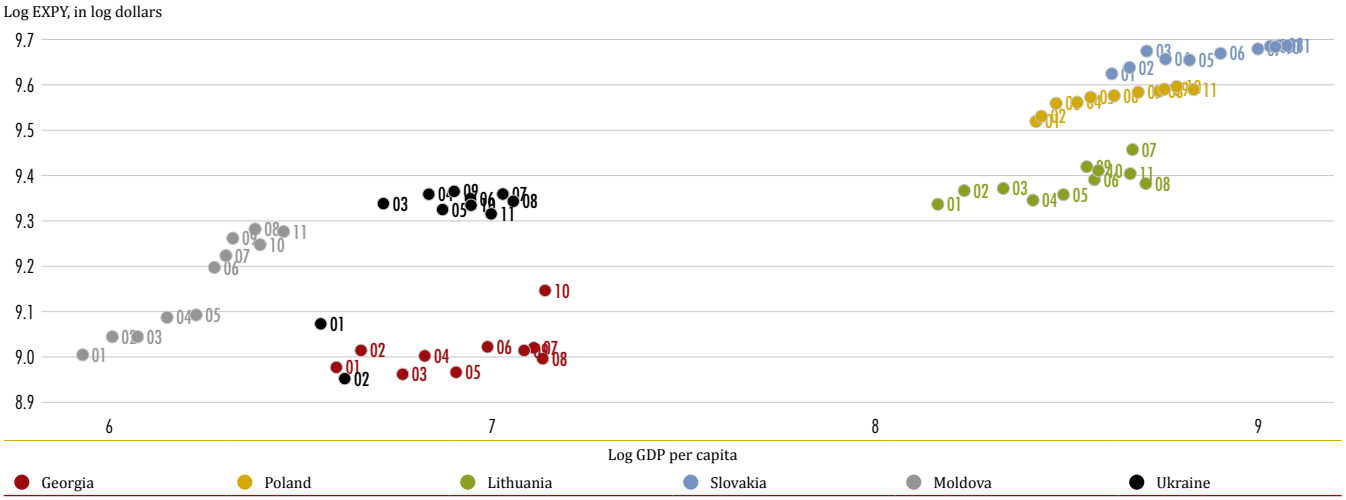
Robust growth of tourist arrivals has contributed to services exports and there is room further improvement in diversifying into new source markets and increasing receipts per visitor. International tourist arrivals have grown rapidly in recent years from 560,000 visitors in 2005 to 1.5 million in 2009 and 4.4 million in 2012. This has powered a considerable increase in tourism receipts in Georgia. At the same time, the bulk of visitors to Georgia are from neighboring countries and tourism receipts per visitor have actually declined over time. This suggests that there is room for improvement in diversifying into attracting higher spending tourists from new countries to Georgia.

4.3. Export Sophistication and Survival

The sophistication of Georgia's export basket has remained stable over the last decade, and is relatively low given Georgia's level of development. Goods that embody greater value addition in terms of ingenuity, skills, and technology, fetch higher prices in world markets. Furthermore, countries producing goods that are more sophisticated than that predicted by their income levels generally tend to grow at faster rates. According to Haussman, Hwang and Rodrik (2006), upgrading of product quality and sophistication indicate leading productivity improvements and can thus be a source of both export and economic growth. One indicator that has recently been used to measure export sophistication is denoted "EXPY". In order to construct the EXPY indicator, one needs first to associate each export product with the average per capita income level of the countries that produce that good. That initial average is termed "PRODY". Then, one needs to average the PRODYs for the export bundle of the relevant country. Figure 4.10 plots the evolution of sophistication indicators for export bundles of Georgia and comparator countries for the period 2000–2011. Countries like Ukraine, with a similar level of income per capita, show a more sophisticated export bundles. In addition, other ECA countries (including Poland, Slovak Republic, and even relatively poorer Moldova) show an impressive upgrading of their export bundle. This contrasts with the relative stability and stagnation of the degree of sophistication of Georgia's export bundle over the past decade.

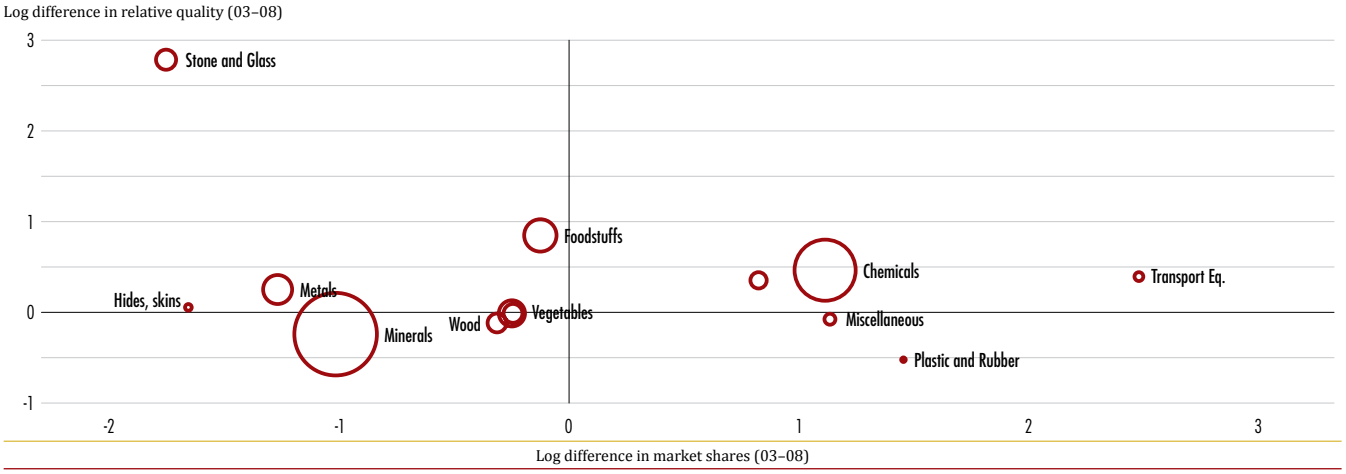
An alternative measure of product quality based on unit prices suggests that Georgia managed to upgrade quality in chemicals, food products in the EU market during 2003–08. Using a highly detailed database on unit values of exports to the EU, a measure of the relative quality of each product exported to the EU by Georgia is constructed and aggregated to the 2-digit level. Figure 4.11 shows growth in the relative quality measure (y-axis) and changes in market shares (x-axis), with each bubble representing a sector. The size of each bubble is the importance of each sector in Georgia's export basket in 2008. In Georgia, chemicals, food products, stone/glass products, and transport equipment products increase in relative quality vis-à-vis competitors in the EU market. Of these, however, chemicals and transport equipment increase their market share. It is possible, however, that

Figure 4.10: Evolution of Export Sophistication Indicators for Selected Countries, 2000–10



Source: Staff estimates based on COMTRADE and WDI data.

Figure 4.11: Changes in Relative Quality and EU Market Shares, 2003–2008



Source: Staff estimates based on data from COMEXT.

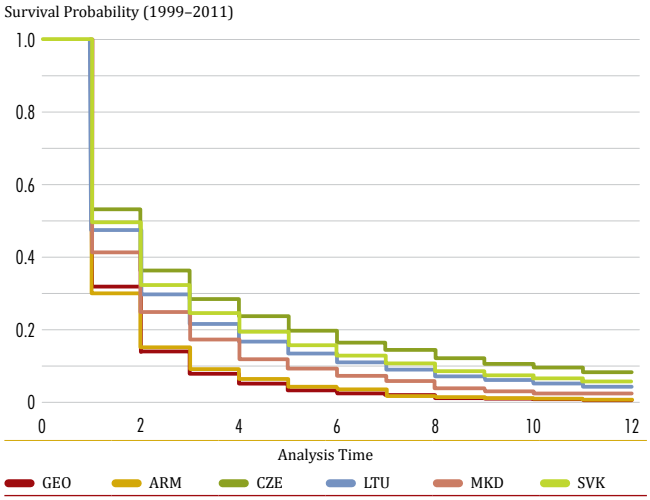
aggregate to the 2-digit level is obscuring some of the underlying dynamics of quality upgrading and improved market shares, so a more detailed analysis of this could prove useful.

For countries to achieve fast export growth, diversification, and quality upgrading, both successful entry into export markets and survival of new export flows are crucial. In fact, the literature finds exporting to be extremely hazardous activity, and particularly so in lower income countries.[50] One of the reasons why some countries are more successful than others in expanding their exports is because of high survival probabilities of new export flows. From a policy perspective, understanding whether the main challenges to export survival are related, for example, to difficulties in specific markets, or with specific products is important in improving prospects for export growth, quality upgrading, and diversification.

50 See, for example, Besedes and Prusa (2004) and Brenton et. al.

Georgia has a comparable record of export survival with Armenia, but its performance is lackluster compared to that of other small successful exporters in Asia or Eastern Europe. Figure 4.12 shows the Kaplan-Meier survival function for Georgia, Armenia, Lithuania, FYR Macedonia, Slovakia and Czech Republic. The probability of a Georgian export flow surviving one year is close to 32 percent, almost two percentage points above that of an Armenian export flow, but 21 percentage points below that of Czech Republic's flows. An alternative way of looking at export survival is to see the mean time length over which an export flow (a particular product being exported to a particular destination) is active. Table 4.4 shows this indicator for Georgia and the same comparator countries. On average, Georgian flows last slightly more than one year active, while those of Lithuania last 2.84 years, those of Slovakia last 3.35 years, and those of Czech Republic last, on average, 3.5 years. Figure 4.12 also reveals that the longer the partnership with the buyer, the lower the probability of exiting. Export flows are more likely to survive an extra year the longer they have been active. This is likely related to the fact that information costs decline as exporting experience accumulates.

Figure 4.12: Survival Rates of Export Relationships



Source: Staff estimates.

Table 4.4: Export Survival–Descriptive Statistics (1999–2011)

Country	Mean Spell Length	Standard Deviation
Armenia	2.05	2.09
Georgia	2.15	2.22
Lithuania	2.84	2.79
FYR Macedonia	2.90	2.79
Slovakia	3.35	3.22
Czech Republic	3.50	3.40

Source: Staff estimates.

Further insight can be obtained by comparing survival probabilities for Georgian product by type of product and destination. Generally, such a comparison indicates that survival probabilities for Georgian exports are higher for primary products and resource-based products, but lower for processed, differentiated products. Furthermore, survival probabilities are higher for exports destined for ECA countries compared to those destined for East Asia. These patterns are expected and are indicative of Georgia's overall exporting competence in the product space and destination markets. Some caveats are in order for this analysis. Ideally, this type of analysis should be performed with firm-level data since aggregation can lead to some biases. It is likely that the use of aggregate data leads to finding higher survival rates than when looking at firm-level data, which would misleadingly suggest that maintaining an export market is 'easier' than it really is. Say for example, if there is substantial churning at the firm level in exports of, say, Georgian hazelnuts to Italy, and this churning implies that over a period of three years, three different firms, one per year, export this product to this market, the aggregate analysis will suggest a survival period of three years, while a firm level analysis will suggest a survival period of one year. This suggests that further analysis using firm-level trade data can prove useful when it becomes available.

4.4. The Policy Setting

A key question for policymakers in Georgia is why exports have not yet served as an engine of higher productivity and economic growth in spite of the far-reaching policy reforms implemented since 2004. As is well known, Georgia has made remarkable progress in improving its business environment along multiple dimensions since 2004, with its ranking in the World Bank's Doing Business indicators improving from 137th out of 183 countries in 2004 to 11th in 2010. The progress made in liberalizing Georgia's trade regime since 2006 has also been impressive—the import regime is now one of the most liberal in the world, with a very low average tariff and with 91 percent of HS 6-digit product lines facing a zero tariff.

Beyond the more general supply-side constraints to productivity growth analyzed in previous chapters, this section looks at policies that may specifically be constraining improved productivity and growth of exports in particular. A number of policy areas are considered. First, the real exchange rate has appreciated considerably in recent years. While this is not in itself a problem, to the extent that the relative productivity of tradables does not keep pace with real exchange rate appreciation, it can lead to the loss of competitiveness of exports. Second, while Georgia has made much progress in improving its trade-related and internal infrastructure in recent years, considerable progress lies ahead to reach the levels of top performers among middle income countries. Third, Georgia is still in the process of implementing trade-related reforms as part of its DCFTA (Deep and Comprehensive Free Trade Agreement) negotiations with the European Commission and there is adequate evidence to indicate that these reforms could facilitate exports to European and international markets. It is important to bear in mind that Georgia does not have substantial natural resources, a large domestic market, or a location contiguous with a large external market. As such, progress along the policy areas noted above can be particularly important in developing its exports.

Table 4.5: Tariffs in Georgia and other ECA countries

in percent

			Simple Average	Weighted Average
Georgia	Agri	2002	12.92	14.25
WTO: June 2000	Agri	2009	5.85	6.31
	Industrial	2002	10.3	9.43
	Industrial	2009	0.31	0.25
Azerbaijan	Agri	2002	12.66	10.25
WTO: Observer	Agri	2009	12.73	6.8
	Industrial	2002	8.13	5.61
	Industrial	2009	8.14	5.93
Moldova	Agri	2001	10.2	9.18
WTO: July 2001	Agri	2008	9.62	10.08
	Industrial	2001	4.12	1.96
	Industrial	2008	3.71	2.37
Turkey	Agri	2003	42.2	13.08
WTO: March 1995	Agri	2009	45.15	23.12
	Industrial	2003	5.22	3.77
	Industrial	2009	4.21	3.31

Source: TRAINS.

Georgia has made impressive progress in liberalizing its trade regime in recent years. Since 2006, it has actively and often unilaterally implemented reforms to liberalize its trade regime. A new customs code consistent with international standards was adopted in mid-2006 which constituted a major trade liberalization reform, with the number of import tariff rates reduced from sixteen to three: 0, 5, and 12 percent. More than 91 percent of HS 6-digit product lines face the zero tariff rate. As a result, by 2009, the weighted average tariff rate for agricultural goods fell from 14.25 percent in 2002 to 6.3 percent by 2009, while that for industrial goods fell from 9.43 percent in 2002 to 0.25 percent by 2009. This made Georgia's trade regime one of the most liberal among transition economies in the ECA region.

The real exchange rate has appreciated considerably in recent years in Georgia, thus potentially constituting a source of bias against exports and tradables in general. Between 2004 and 2008, the real exchange rate appreciated by almost 50 percent (figure 4.13). During this period, overall total factor productivity in the economy expanded by a cumulative 25 percent, with TFP of tradables expanding by less. As such, it is clear that the relative productivity of tradables did not keep step with the sharp real appreciation of the exchange rate. After depreciating following the August 2008 war, the real exchange rate again appreciated by about 20 percent between July 2010 and June 2012. Since then, it has depreciated by about 6 percent.

Figure 4.13: Real Effective Exchange Rate in Georgia

Dec 1995=100, increase means appreciation

Source: National Bank of Georgia.

The persistent current account deficit in Georgia suggests that the real exchange rate remains overvalued. Although estimating the degree of real overvaluation is sensitive to a number of assumptions, the preponderance of the evidence suggests that policies to reduce the overvaluation of the exchange would be useful in reducing the bias against the tradable sectors. While other structural reforms can also improve productivity of tradables, this can be difficult to accomplish in an environment where an overvalued exchange rate constitutes a persistent bias against the tradable sector. One instrument that can resist overvaluation of the exchange rate is to use periods of market stability to step up open market purchases of foreign currency and thereby build international reserves. With international reserves at 3.7 months of imports at end-2012 and given the increasing reliance on less durable sources of external financing, strengthening the international reserve position would reinforce external stability.

The second policy area that will require attention to specifically improve productivity of tradables is to further improve Georgia's trade-related and internal infrastructure. This is particularly important given that Georgia is not geographically contiguous with the large EU market, unlike countries in Central and Eastern Europe. Although Georgia has made significant progress in this area in recent years by investing in and streamlining its customs infrastructure, considerable progress lies ahead to reach the level of top performers among middle income countries. In fact, Georgia is ranked 77 out of 155 countries in the most recent Logistics Performance Survey of 2012. Other middle income countries such as Turkey, Bulgaria, Thailand, and Vietnam are ranked 27, 36, 38, and 53, respectively. When comparing to Vietnam (among the low-middle income top performers), Georgia appears to particularly lag in the areas of the ease of arranging competitively priced international shipments; the ability to track and trace shipments; and the timeliness of shipments in reaching the destination within the scheduled or expected delivery time. A deeper diagnosis of trade and logistics systems in Georgia can help identify specific policies and investments to move Georgia toward the level of top performers among middle-income countries.

Beyond improvements in pure trade and logistics infrastructure, Georgia will also need to invest in its internal infrastructure to better connect secondary and rural markets to the border. The domestic logistics performance indicators for 2012 indicate that the lead time to export through the port or airport supply chain is 6 days in Georgia, compared to 2 days in Turkey, Bulgaria, Thailand, and Vietnam. The lead time to export through the land supply chain is 8 days in Georgia, compared to 3 days in Turkey and Bulgaria and 2 days in Thailand

Table 4.6: Logistics Performance Index, Georgia and Comparators, 2012

in rank and scores of 1–5

Country	Rank	Overall Score	Customs	Infra-structure	International shipments	Logistics competence	Tracking & tracing	Timeliness
Singapore	1	4.13	4.10	4.15	3.99	4.07	4.07	4.39
Turkey	27	3.51	3.16	3.62	3.38	3.52	3.54	3.87
Bulgaria	36	3.21	2.97	3.20	3.25	3.10	3.16	3.56
Thailand	38	3.18	2.96	3.08	3.21	2.98	3.18	3.63
Czech Rep	44	3.14	2.95	2.96	3.01	3.34	3.17	3.40
Slovak Rep	51	3.03	2.88	2.99	2.84	3.07	2.84	3.57
Vietnam	53	3.00	2.65	2.68	3.14	2.68	3.16	3.64
Lithuania	58	2.95	2.73	2.58	2.97	2.91	2.73	3.70
Georgia	**77**	**2.77**	**2.90**	**2.85**	**2.68**	**2.78**	**2.59**	**2.86**
Macedonia	99	2.56	2.24	2.60	2.66	2.66	2.41	2.79
Armenia	100	2.56	2.27	2.38	2.65	2.40	2.57	3.07
Moldova	132	2.33	2.17	2.44	2.08	2.15	2.44	2.74
ECA Region		2.71	2.47	2.60	2.66	2.65	2.75	3.14
Low-Middle Inc		2.55	2.33	2.37	2.56	2.50	2.53	3.00

Source: World Bank Logistics Performance Survey.

and Vietnam. These lead times are likely to be even greater for products (such as processed foods) for which production is more dispersed across secondary and rural parts of Georgia. While Georgia has made considerable investments in its international road network in recent years, there is a large backlog of the secondary and rural road network that is in serious need of rehabilitation.

The third policy area that will require attention to stimulate productivity and growth of exports is trade-related reforms to enhance access for Georgian products in EU and international markets. A recent study commissioned by the European Commission estimates the impact of a Deep and Comprehensive Free Trade Agreement between Georgia and the EC that includes full tariff liberalization and regulatory approximation in the areas of Sanitary and Phytosanitary (SPS) regulations and Technical Barriers to Trade (TBT)[51]. The study finds that such an agreement would raise GDP in Georgia by 1.7 percent in the short run and 4.3 percent in the long run. Georgia's exports would rise by 12 percent and imports would rise by 7.5 percent. Georgia has already made considerable progress in identifying and implementing trade-related reforms as part of the reforms to prepare for ongoing DCFTA negotiations with the EU. A legislative package, including a framework law on competition, a Technical Barriers to Trade (TBT) Code, and the Law on Food Safety was approved by Parliament in May 2012. Implementation of these measures is ongoing.

The trade-related reforms are likely to have important effects on specific export items with potential in Georgia. In the area of processed food export, for example, a key determinant of export success is the ability of exporting firms to meet international food safety standards. The analysis of processed food exports in this chapter indicates that Georgian exporters are yet to penetrate lucrative markets in the EU and other developed countries. This may reflect lack of adequate capacity on the part of Georgian processed food exporters to meet international food safety standards. For instance, the WTO Trade Policy Review of Georgia (2009) notes that the SPS system

51 "Trade Sustainability Impact Assessment in support of negotiations of a DCFTA between the EU and Georgia and the Republic of Moldova", April 2012.

in Georgia (the former Soviet GOST food safety system) is not compatible with that of EU, and only products that do not require official health certification are currently exported to the EU market. For example, two important Georgian exports are wines and hazelnuts for which the official EU SPS certification is not required (and the producers can provide conformity). In 2005 Georgia passed a new law on 'Food Safety and Quality'' based on the OECD-based Hazard Analysis and Critical Control Points (HACCP) food safety system. However, because of lack of funding, insufficient institutional capacity, and fear of factory closure in the food industry, the law was amended twice, resulting in the suspension of its core article. There is also strong empirical evidence that internationally compatible food-safety standards are a sine quo non for success in penetrating developed-country food markets (Athukorala and Jayasuriya, 2003; Jongwanisn, 2009).

4.5. Insights from Sector Studies: Apparel and Wine

The sector studies in the appendices explore the prospects and constraints facing export growth in two specific sectors in Georgia: apparel and wine. In emerging markets, key products can often serve as a driving force behind export expansion. Examples include readymade garments in Bangladesh, electronics in several Southeast Asian economies, and software outsourcing in India. Efforts to address growth constraints in such sectors can yield significant dividends in facilitating export expansions. Two export sectors that have demonstrated potential at different levels in Georgia include wine and labor-intensive apparel. While wine has historically been Georgia's dominant agricultural export, labor-intensive apparel is an incipient sector that is only beginning to demonstrate success in connecting to international production networks. In addition to exports, both of these export sectors also have the potential to significantly boost employment generation in Georgia.

Exploring sector specific prospects and constraints is bound to raise questions about whether the objective is to engage in industrial policy. Industrial policy often means different things to different people. More interventionist forms of industrial policy often amount to identifying specific products in which a country has comparative advantage and then supporting them through a variety of methods, often in a discriminatory fashion. The rationale put forth often has to do with learning by doing and economies of scale. Yet, the history of development economics is replete with examples of countries that have tried pursuing such policies, wasted large amounts of public resources, with the end result of actually discriminating against exports and growth of other sectors and industries deemed less worthy.

The analyses in the sector studies refrain from any attempts to identify or pick sectors and the policies that emerge resonate with those identified in earlier chapters. The sector studies focus on two sectors that have developed organically in Georgia, with a view toward exploring their growth prospects, constraints, and possible policy responses. The objective is to ensure that the policies identified generally do not discriminate in favor of these industries and against other industries. In fact, the policies that emerge from the sector studies resonate with the cross-cutting policies identified in the foregoing chapters. For example, in both the apparel sector and in the wine sector, the sector studies suggest that there is an important need for provision of vocational education that closely tracks the needs of the sector. Another genre of policies to emerge from both sector studies is support for collective investment promotion and marketing. Perhaps all governments engage in some form of investment promotion and marketing effort. The sector studies indicate that it can be useful to target these efforts

toward particular constraints and needs faced by the sectors, while at the same time ensuring that the efforts are pursued in a way that does not commit excessive public resources.

4.6. Conclusion: the way forward

The analysis in this chapter indicates that productivity and growth of Georgia's exports can evolve along one of several paths depending on the choices that are made. On the one hand is the path of limited progress in expanding exports and improving their quality and sophistication over time, as nontradables continue to drive economic growth in Georgia. Along this path, the commodity structure of Georgia's exports would continue to be dominated by metals and minerals. Growth of employment generating processed exports would continue to be constrained by an overvalued exchange rate, non-tariff barriers in the EU and other international markets, and logistics infrastructure that lags top performers among middle-income countries. On the other hand is the path of reform including enhancing price competitiveness of tradables, aggressively pursuing trade-related reforms to enhance market access to EU and other international markets, and further improving trade and internal infrastructure to better connect with external markets. Along this path, the export share of GDP would rise over time in Georgia, with a rising share of processed products connected to international supply chains, and improved quality and sophistication of the export basket over time. This path would put rapid productivity growth in Georgia on a sustainable footing as Georgia taps international markets to move toward becoming an upper-middle income country in the years ahead.

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Appendix A: Apparel Sector

Georgia had a strong apparel and textile industry during the Soviet era, although production ceased and factories closed during the 1990s. Adding to this historical experience is a set of factors that hands Georgia a competitive edge in the new global apparent marketplace. These factors include a streamlined business environment, favorable trade agreement, an abundant supply of low-cost labor, and location next door to the world's second largest exporter of apparel—Turkey. As a result, apparel production and exports have picked up in recent years from low levels, fueled in large part by Turkish firms that are using Georgia as a low-cost location for assembly or Cut-Make-Trim (CMT). Employment in the sector has also picked up. Although productivity in Georgia is lower than in Turkey (or other established apparel manufacturing countries) and distances and transportation costs to Europe higher than from Turkey, Georgia offers a friendly business environment, competitive labor costs, attractive trade regime, low electricity costs, and convenient trade logistics and transportation routes.

The objective of this section is to assess in detail the challenges and opportunities in unleashing the productive, export, and employment potential of Georgia's apparel sector, and recommend specific measures to address the bottlenecks identified. Key policy priorities are in the areas of investment promotion and marketing, education and training, and relaxing the high costs of finance, while preserving and reinforcing the advantages already benefiting Georgia.

This section is organized as follows. The first part of this section analyzes trends in the global apparel value chain. This is followed by an analysis of Georgia's apparel value chain. Georgia's competitive advantages and growth challenges are reviewed, before then outlining recommendations.

Global Apparel Industry: Structure and Trends

For many developing countries, the apparel sector is the first manufacturing sector to become established. Entry typically starts with Cut/Make/Trim (CMT) activities due to the relatively low start-up costs, low-skill requirements, labor-intensive nature of the sector, and feasibility of small-scale production (see text box below). Most workers are concentrated in the assembly-related segments of the value chain (CMT or OEM) and tend to be young, female workers with limited education. The apparel sector has, in many countries, been the foundation for sustained industrial development and economic growth. The acquisition of technical know-how and equipment for light manufacturing facilitates industrial upgrading that drives the expansion of exports into more advanced market segments and more high-tech exports[52].

Because of increasing global competition, particularly on costs, upgrading strategies are necessary for suppliers to survive. Upgrading to OEM, ODM or OBM production systems (vertical integration in the value chain) enables suppliers to absorb more of the value-added activities, creating more and higher-paid employment

52 Bonacich et al, 1994.

for the workforce. However, to successfully upgrade to higher segments of the value chain, countries often need a domestic or regional textile industry, a better qualified workforce, the presence of larger textile and apparel manufacturers and, in the case of upgrading into design and branding, a strong commitment to develop the necessary workforce and establish a national brand. As well as upgrading the functional production system, firms also have the opportunity to engage in product upgrading (shifting to more sophisticated apparel products) and process upgrading (increasing the efficiency of internal processes).

Functional Production Systems

Assembly/Cut-Make-Trim (CMT): Apparel manufacturer receives inputs and specifications from the buyer and is responsible for cutting, sewing, supplying the trim and shipping the ready-made garment. The contract manufacturer has a variety of customers and does business on an order-by-order basis.

Original Equipment Manufacturing (OEM)/Free on Board (FOB)/Full Package: Apparel manufacturer purchases the textile inputs, and provides all production services, finishing, and packaging for delivery to the retail outlet. The buyer provides the design and often specifies textile suppliers.

OEM with Domestic Textile Capabilities: The shift from CMT to OEM is often associated with the development of a domestic textile industry; the addition of textile mills an important step in supply chain upgrading. An industry for knitted textiles often develops before woven textiles due to differences in capital intensity.

Original Design Manufacturing (ODM): Apparel manufacturer is involved in the design, as well as production, and organizes and coordinates the design, approval of samples, selection, purchasing and production of materials, finishing, packaging and delivery to the retailer.

Original Brand Manufacturing (OBM): Apparel manufacturer is responsible for branding and marketing the final products and may do these activities on a contract basis on behalf of the buyer, or themselves, marking the transition from apparel supplier to a lead firm, typically in domestic or regional markets.

The private sector has typically played a leading role in workforce development by providing internal training of entry-level employees. There have also been a number of efforts by both the public sector and donor agencies to engage technical and vocational training schools in the industry. In Turkey and Sri Lanka, where the industry upgraded to advanced stages of the value chain, stakeholder coordination, along with some public-private partnerships (PPPs) to support workforce development, have been instrumental. These alliances include private firms, industry associations, educational institutions, and the private sector. Successful workforce development for ODM and OBM stages in the value chain has generally leveraged know-how from the developed world by engaging foreign universities to help design curricula for local programs and hiring foreign consultants to help develop in-house talent.

In 2011, the largest apparel exporter by far was China, with $166 billion in exports, while the second was Turkey with $14 billion. Dominant country groups included the European Economic Area, South Asia and South

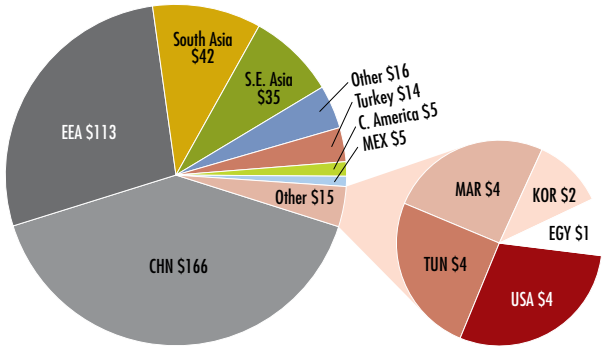
East Asia. Since Europe is the ideal market for Georgian apparel products, it is important to examine the origins of European apparel imports. Approximately one third originate from within Europe. A similar share is exported from China. South Asia, South East Asia and Turkey then follow.

Among apparel exporters in the region, Turkey clearly stands out. A number of small countries, such as Moldova, Albania, Bosnia and Herzegovina, Serbia, Croatia, Macedonia and Belarus all have annual exports, in value terms, exceeding those of Georgia. Although Georgia has a small share in the region's exports, it leads both Armenia and Azerbaijan.

Despite starting from a very small base, apparel exports from Georgia showed impressive growth among other regional countries. Such growth is largely attributable to the Turkish investors operating in Adjara, although Georgian firms are also beginning to contribute to the country's exports; three firms commenced exports for the first time in 2011.

Figure A.1: World Apparel Exports by Value, 2011

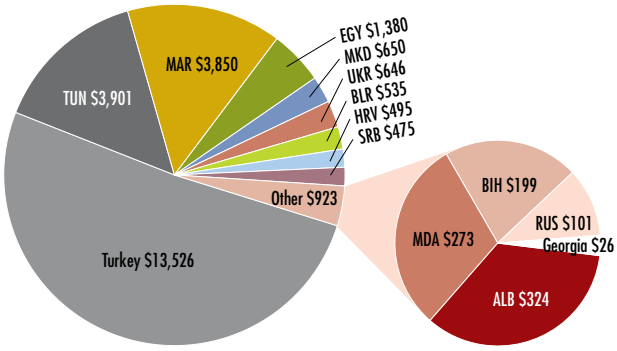
in billions of dollars



Source: Trademap.org – Data for HS Codes 61 & 62.

Figure A.2: Regional Exports Globally by Value, 2011

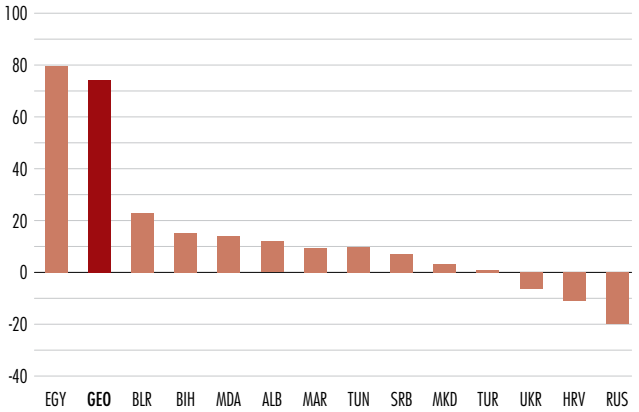
in millions of dollars



Source: Trademap.org – Data for HS Codes 61 & 62.

Figure A.3: Regional Growth of Apparel Exports Globally, 2007–11

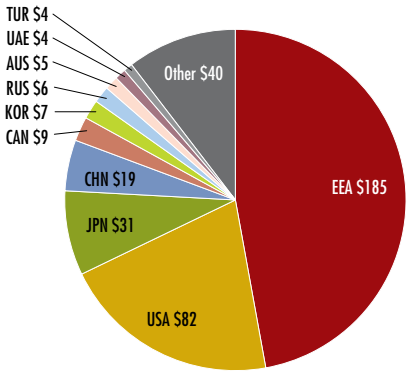
in percent



Source: Trademap.org – Data for HS Codes 61 & 62.

Figure A.4: World Apparel Imports by Value, 2011

in billions of dollars



Source: Trademap.org – Data for HS Codes 61 & 62.

The largest markets for world apparel imports include the European Economic Area, the USA and Japan, which together comprise more than 75% of total imports. The largest markets within Europe for apparel imports include Germany, the UK, France, Italy, Spain and the Netherlands, each importing more than US$ 10 billion annually. Apparel market demand in Europe is expected to grow by 4.5% per year between 2010 and 2015, from US$ 218 billion to US$ 272 billion, according to the Economist Intelligence Unit.

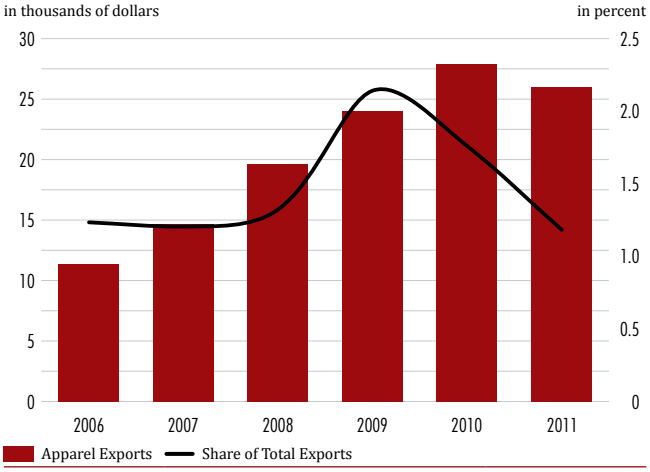
Georgian Apparel Production[53]

Georgia has a rich history of apparel and textile production dating back to Soviet times. Seven large textile manufacturers produced cotton and silk, and numerous apparel companies produced a range of garments for the Soviet market. According to interviews with the owners of Georgian apparel companies that existed during the Soviet era, more than 15,000 people were employed in the textile and apparel sectors at that time (around three times as many as employed now). Vocational training centers known as *Technikums* provided courses in textile and apparel design and engineering for light manufacturing. Textile and design were also taught at universities as light industry was well developed in the country.

Lacking market-based principles and no longer able to produce for the Soviet bloc countries, the Georgian apparel and textile industries collapsed, along with the break-up of the Soviet Union. Factories closed, the buildings were privatized, and workers were laid off. Much of the equipment necessary for industrial production became obsolete, some was sold and other machinery was abandoned due to damage. Although the passion and skill for hand-made garment production remained in pockets of the country, production did not pick up on an industrial scale for more than 20 years. Over time, entrepreneurs wishing to revitalize the sector purchased old machines and physical plants and restarted cut, make and trim (CMT) production for the domestic market. Concurrently, Turkish investors interested in Georgia's low cost labor and energy costs, and looking to outsource production turned to the Adjara region of Georgia and began setting up plants.

Annual apparel exports increased on average by 17.7 percent between 2006 and 2011, from US$ 11.6 million to US$ 26 million. The year of highest growth was observed in 2008 when it peaked at 32 percent. Export volumes decreased slightly (6.7 percent) between 2010 and 2011. Apparel exports in the first half of 2012 were valued at US$ 19.5 million; 75 percent of the 2011 total. Apparel's share of total exports grew between 2006 and 2009, from 1.2 percent to 2.1 percent, although in 2010 and 2011 decreased to 1.8 percent and 1.2 percent respectively. It rebounded in the first half of 2012

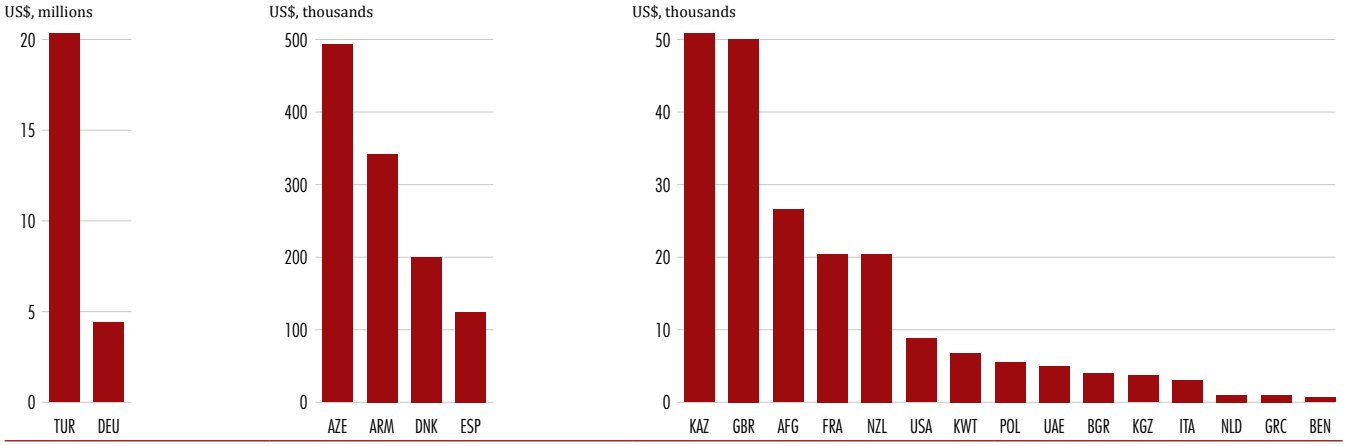
Figure A.5: Georgia's Apparel Exports and Share of Total Exports, 2006–11



Source: Trademap.org – Data for HS Codes 61 & 62.

53 Data presented in this section is accurate according to data provided by the National Statistics Office of Georgia as of the 18th October 2012.

Figure A.6: Georgia's Apparel Exports by Country, 2011



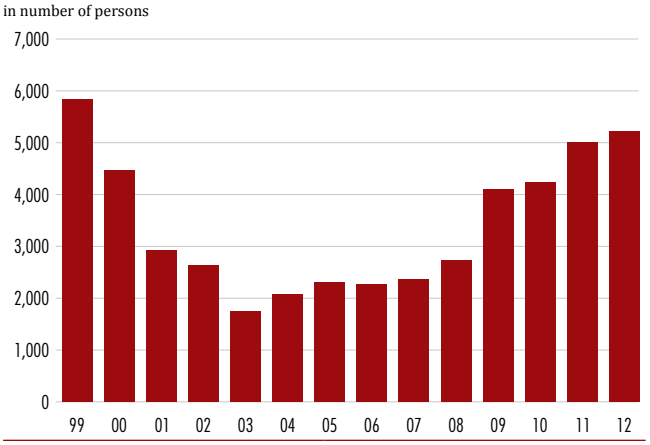
Source: Trademap.org – Data for HS Codes 61 & 62.

to 1.71 percent. It should be noted that the export figures illustrated above include re-exports due to Outward Processing Trade.

In 2011, Georgia exported the majority of its apparel products to Turkey (78% - US$ 20.3 million) and Germany (16.7% - US$ 4.3 million). This was followed by Azerbaijan (1.9% - US$ 0.491 million), Armenia (1.3% - US$ 0.34 million), Denmark (0.1% - US$ 0.2 million) and Spain (0.5% - US$ 0.2 million). However, although Georgia's volumes of exports to Turkey dominate the export environment, much of this apparel ends up in the EU market, due to the nature of the Turkish apparel supply chain. The reason for Azerbaijan and Armenia in 3rd and 4th place respectively, may be due to the low costs of transportation and demand for similar products in neighboring countries.

Employment in Georgia's apparel sector has picked up since 2003. Since then, it has been increasing annually at an average rate of 12.8 percent to reach 5221 individuals in 2012. These statistics do not include those employed on a temporary basis; data is unavailable for temporary employment. Average monthly salaries between 2006 and 2011 increased annually by 14.9% from GEL 182.80 ($103) to GEL 318.4 ($ 188). Employment in the apparel sector is dominated by women (91%)[54]. In the manufacturing sector, women receive approximately 65% of the male salaries. Apparel employees receive approximately 53% of average industry wages and 62% of average manufacturing wages.

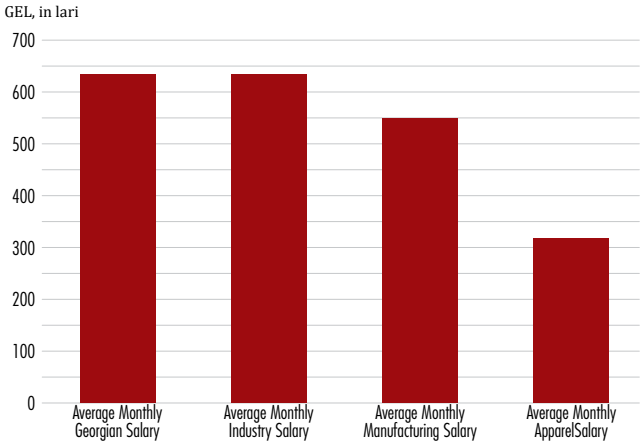
Figure A.7: Employment in the Apparel Sector, 1999–2012



Source: Survey data.

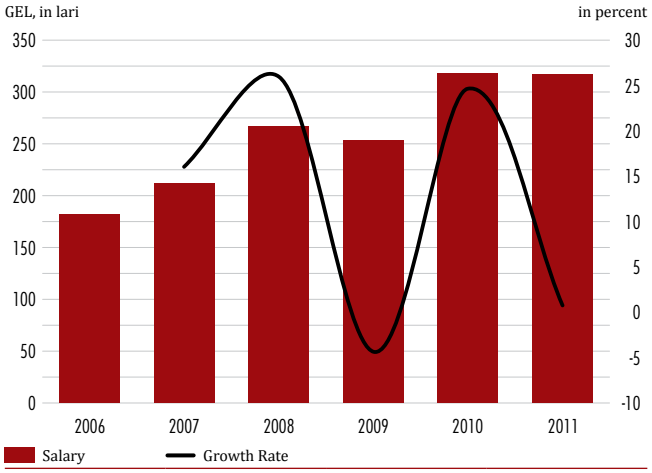
54 Study of Labor Market Needs in Georgia (2012).

Figure A.8: Average Monthly Salaries, 2011



Source: Survey data.

Figure A.9: Average Monthly Apparel Workforce Salaries, 2006–11



Source: Survey data.

Georgia's Apparel Value Chain

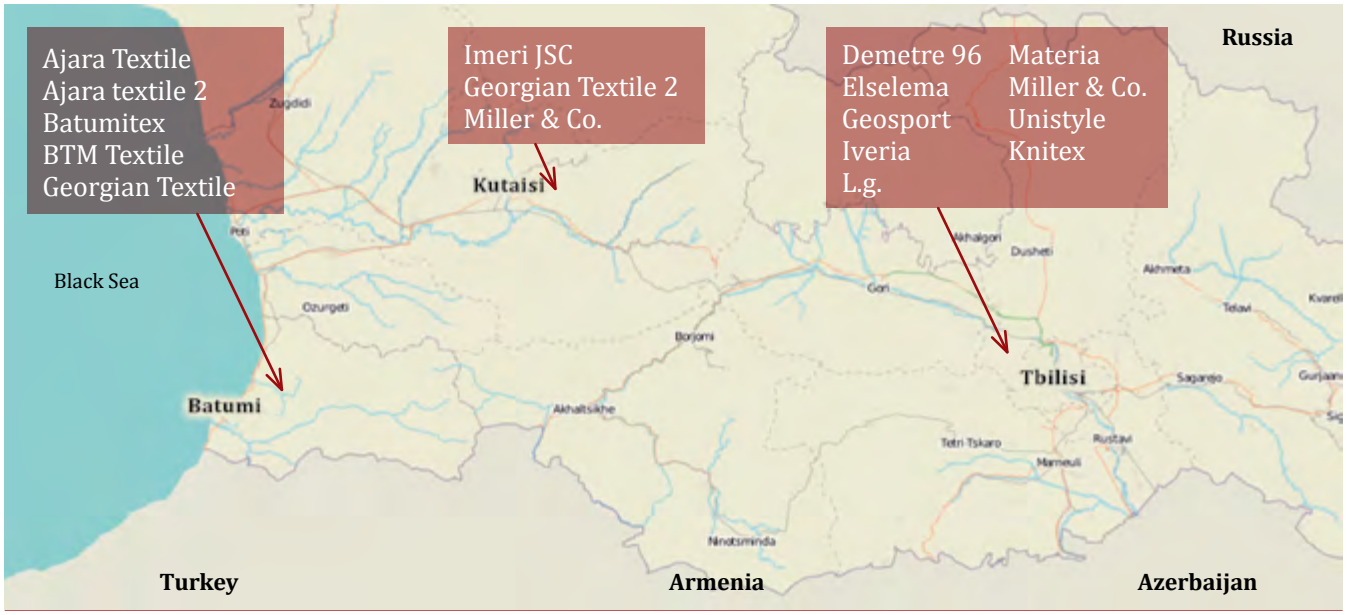
According to the National Statistics Office of Georgia, there are approximately 200 apparel manufacturers in Georgia. Of these, approximately 180 are small and micro in size and not involved in mass production, having no scale or resources to access world markets in a significant way. In 2007, Turkish apparel companies started to invest in Georgia and established factories focusing on CMT production. There are currently five Turkish-invested apparel companies operating in Georgia valued at around US$ 10 million. All inputs are brought from Turkey under the Georgia-Turkey Free Trade Agreement (FTA). The factories currently produce for several well-known international brands. The majority of Georgian apparel companies (three main companies in and around Kutaisi and nine companies in Tbilisi) fit the CMT model, as inputs are all provided by the buyers. The Turkish-invested companies in Adjara, given their greater depth of knowledge and access to financial resources from parent companies, typically have a wider range and better quality equipment compared to their Georgian counterparts. Subcontracting by Turkish to Georgian firms or among Georgian firms takes place, although this is more difficult for international brands with restrictions on subcontracting.

There is significant demand for skilled labor among apparel companies. According to the results of a recent survey of about 50 primarily large and medium sized enterprises[55], apparel companies assessed their employees as competent or fairly competent, although difficulty still remained in identifying employees with the relevant competencies and skills within the Georgian labor market (very difficult – 64%; somewhat difficult – 10%; fairly difficult – 8%). Productivity levels vary according to factory, product and product complexity, but are gauged to be between 45% and 60% of the levels in Turkey.

Turnaround times for Georgian and Turkish-owned apparel firms vary between ten days and six weeks. Transport time to Europe is then approximately seven days. End markets vary and are typically Turkey or the EU—Germany, Italy, and the UK. Batumitex, for example, exports to Mursa, two hours from Istanbul, from where

55 Study of Labor Market Needs in Georgia (2012).

Figure A.10: Location of Apparel Manufacturers in Georgia



Source: Apparel industry sources.

the products then go on to the EU. Turkish companies in Adjara have marketing and sales offices based at their parent companies and do not get involved directly in marketing activities; in effect they act as satellite factories. Georgian companies are more likely to work directly with buyers, some of them Turkish. Logistics are handled by Georgian or Turkish transportation and logistics companies. Road is the preferred means of transport to Turkey and Europe, being faster, more cost effective, involving more simplistic customs procedures and avoiding waiting times. Transporting one container (40ft) from Istanbul to Tbilisi costs approximately US$ 3,000–3,500 (including taxes) by road. The transportation of goods from Tbilisi back to Istanbul costs about one half of the initial expense (US$ 1,500–1,750).

Supporting Environment

The well-known liberal business environment reforms implemented since 2004 are a significant draw for Turkish firms. Specifically, these include a business friendly tax regime, streamlined tax collection systems, simplification of customs procedures, reduction in number of licenses and permits, and the introduction of "one-stop-shops" and "silence is consent" principles, and liberal labor regulations. The improved transport and customs infrastructure has also reduced transit times and costs between Turkey and Georgia.

Georgia's preferential trade regimes with various countries are another draw. Georgia's Free Trade Agreement with Turkey (since 2008), Most Favored Nation (MFN) status with WTO member countries; Generalized System of Preferences (GSP) with USA, Canada, Japan, Switzerland, Turkey and Norway; GSP+ with the EU (7200 items) provide a range of benefits for investors wishing to use Georgia as a production base. Negotiations are currently being held on a Deep and Comprehensive Free Trade Agreement (DCFTA) with the European Union.

Georgia's highly competitive labor costs, particularly when compared with Turkey is another advantage. According to Georgian apparel companies, and supported by data from the National Statistics Office of Georgia, minimum gross salaries (including benefits such as meals, transportation, and health insurance) are between US$ 150 and US$ 250 per month. Salaries for experienced staff undertaking non-assembly tasks can rise to US$ 500 per month. In Turkey, the minimum wage is approximately US$ 600 per month (including taxes, but excluding meals, transportation, etc.). Labor in the larger cities, such as Istanbul, is more expensive than in Anatolia. According to one Turkish-owned apparel company in Adjara, the cost of production per person is approximately US$ 370 per month, including food, taxes, electricity and other expenses; one third the typical costs in Turkey. Furthermore, electricity, a significant cost in apparel manufacturing is approximately two and a half times lower in Georgia than Turkey.

The Georgian National Investment Agency (GNIA) provides support services to the apparel industry in terms of export and investment promotion in target markets (currently Turkey and Germany). The government also offers incentives to investors, such as facilitating and part-funding the training of employees, and land and/or buildings in the Guria region for apparel and textile factories.

Since 2011, the GoG has started to focus on offering apparel sector training with technical support from EPI. State vocational colleges now offer three to nine month courses to prepare sewers, mechanics and quality assurance staff. Georgian vocational colleges are also being assisted in developing effective curricula and teaching programs for instructors and students based on Georgian apparel industry needs and international experience.

Georgia's Apparel Industry Growth Challenges

Despite the significant competitive advantages that give Georgia an edge over rivals in the nearby and wider region, there are also several challenges the country must overcome. These are important in order for the apparel sector to grow, become an increasing contributor to the economy (in terms of exports, employment and FDI attraction) and compete against other growing apparel manufacturing countries.

With most activity in the sector limited to CMT, there is a lack of OBM and ODM functional production systems and limited product and process upgrading. This results in low profit margins, value added, and wages (since only assembly staff are needed), as well as limited skills development. While CMT is often the starting point, encouraging Georgian firms to interact further with their Turkish counterparts can eventually lead to movement into higher value added activities. Although foreign-owned firms with large global supply networks can stimulate knowledge and process improvement, value-added activities in the chain are carried out at their home base. Moving up the domestic value added ladder, therefore, often requires greater involvement of local firms. Turkish-owned firms in Adjara have welcomed Georgian companies to their factories to introduce them to modern processing techniques. Repeating similar experiences and undertaking study tours to mainland Turkey will enable Georgian firms to better understand opportunities for product and processing upgrading.

Accessing finance at reasonable cost is also a problem for many Georgian apparel manufacturers. High interest rates make borrowing for apparel manufacturers problematic. Leasing services are currently at an early stage of development. Improving access to finance, particularly for SMEs, will need a concerted effort from banks, non-bank financial institutions, apparel manufacturers and the government.

The low skill levels and productivity among assembly line staff is a significant constraint facing firms. Many firms maintain a continued emphasis on less-costly on-the-job training to address skills gaps, rather than use formal training. In Georgia, as in many other countries, this is due to the mismatch between skills provided by these institutions and the private sector needs. The education and industry sectors must work more collaboratively to provide courses that fully satisfy the needs of the private sector in terms of curricula, balance of theory and technical skills, use of appropriate equipment, addition of soft skills in the curricula and length of course. Some progress has been made with the curricula, equipment available at vocational colleges, and practical experience. However, the system of vocational education lacks flexibility to provide short courses. Six month courses are provided when industry requires courses to be a maximum of 2–3 weeks.

A shortage of skilled and qualified Georgian supervisors and management constrains upgrading within the industry. Engaging expatriates may solve immediate technical problems. However, in many cases, language barriers and cultural incompatibilities limit knowledge transfer. Specific management and supervisor development programs for local employees would ease this challenge, while improving the efficiency and impact of on the job training by supervisors.

Georgia currently lacks labs to provide apparel testing services and companies able to undertake apparel industry-specific accreditation services. There are currently no labs in Georgia for testing fabrics and textiles for content, color fastness, skewing, bobbling, flammability, strength, stain repellency, water resistance, wrinkle resistance and compliance with required specifications. If testing is requires, labs in Turkey are typically used. Turkish firms Intertek and SGS have made trips to visit apparel companies in Georgia, are capable of undertaking testing, and are qualified to undertake accreditation of a range of international, national and apparel industry standards (European, British, Chinese, American, etc.).

Recommendations

The apparel sector should pursue a two-pronged strategy of attracting higher volumes of CMT activities, while addressing constraints to upgrading within the sector into higher value added activities. As the forgoing analysis indicates, three key areas that will require specific attention are: (i) investment promotion and marketing; (ii) education and training; (iii) relaxing financing constraints. This section lists specific measures that can be pursued in each area.

The sector would also benefit from an informal, practical short to medium-term strategy to articulate a clear vision and goals, and demonstrate consensus among the variety of industry stakeholders. The strategy should be supported by Specific, Measurable, Achievable, Realistic and Time-bound (SMART) objectives, highlight targets, and propose indicators to demonstrate tangible impacts. It should also be based on sound industry data, which may have to be collected for the first time, and the range of government and donor studies that have been undertaken.

Investment Promotion and Marketing

- Facilitate establishment of new relationships with buyers and investors in target markets through participation in trade events and apparel conferences, organization on familiarization trips, reverse trade missions, and visits to/by apparel associations;

- Undertake carefully targeted and properly implemented investment promotion in Turkish and European markets to build awareness and attract new investments in apparel and textile manufacturing;

- Convince major international buyers to open an office in Georgia to help Georgian firms upgrade their production and reach out directly to a wide range of additional clients.

- Provide guidance to apparel manufacturers on utilizing and benefiting from existing trade agreements;

- Strive to develop an FTA with the USA in order to attract huge amounts of Turkish investment.

Education & Training

- Facilitate ongoing efforts at vocational colleges to improve the delivery of relevant training for sewers, mechanics and quality assurance staff. Establish short term courses required and demanded by industry;

- Foster improved relationships between vocational colleges and apparel manufacturers;

- Build capacity within universities to teach contemporary apparel and textile design, while also building strong linkages with the industry and providing internships at apparel manufacturers. Create linkages with foreign universities teaching apparel and textile design;

- Establish textile engineering department at a university course to improve production and management of the apparel supply chain. A scholarship program for students to study textile engineering overseas could boost skills development in this field;

- Provide soft-skills training for mid and senior management staff of apparel companies, focusing on marketing, operations, human resource management, etc.;

- Provide technical firm-level assistance, and organize study tours for Georgian apparel companies to guide them in upgrading, diversifying products, increasing efficiency and productivity and adopting new production processes.

Relax Financing Constraints

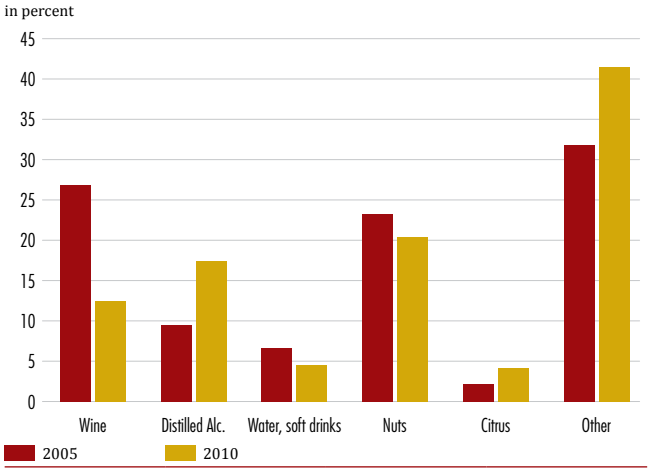
- Encourage development of financial instruments tailored to export-oriented firms, allowing them to make long-term investments in upgrading (e.g. guarantees for working capital);

- Seek to provide apparel companies with financial advisory services and support in obtaining financial resources for investment and/or upgrading. A number of countries have also provided industry incentives (e.g. provision of bonded warehouse facilities, financial support for technological upgrading, export credit guarantees, financing of on-the-job training, etc.).

Appendix B: Wine Exports and Rural Development

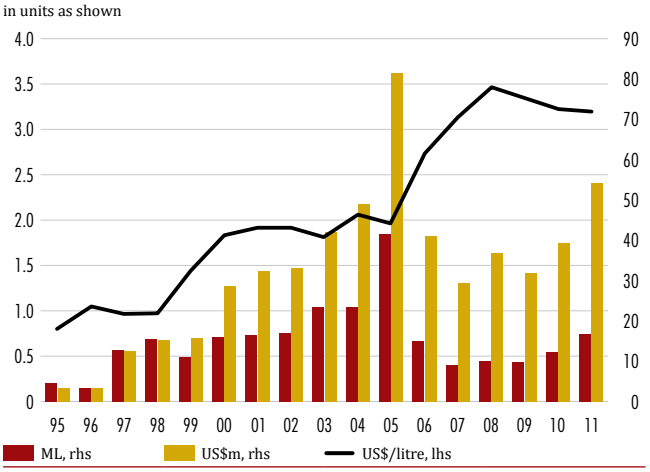
Within Georgia's rural economy the wine industry is dominant. The industry can thus have a significant impact on the productivity and livelihood of almost half of the labor force that lives in farm households and is engaged in low-productivity activities. With the vast majority of the poor in rural areas where earnings are a fraction of urban wages, agricultural and rural development are crucial to improving living standards in Georgia. Most farmers have a vineyard and produce wine for self-consumption, and some small and medium farm enterprises also sell grapes to commercial wineries, often under contract. Between 92 and 95 percent of the country's grapes are grown on family farms, and they account for around two-fifths of the volume of all fruit produced in Georgia. All but 8 percent of grapes are used for wine (the rest for table grapes). The value of Georgia's wine output, including for subsistence consumption, amounted in 2009 to 0.7 percent of GDP, which is similar to that in Argentina and South Africa, only a little below France and Portugal's 0.9 percent and Chile's 1.2 percent, but well below Moldova's 4.6 percent (based on data in Anderson and Nelgen 2011).

Figure B.1: Share of Agriculture and Food Exports, Georgia



Source: Georgian Wine Association and Geostat.

Figure B.2: Wine Export Volume, Value, and Price, Georgia



Source: Georgian Wine Association and Geostat.

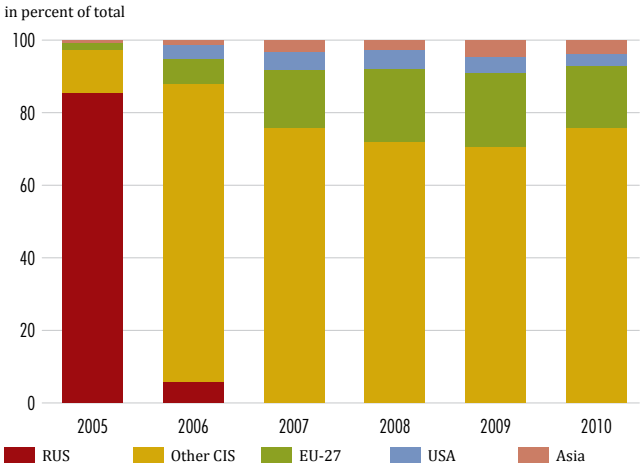
Historically, most of Georgia's wine exports have gone to Russia. In the ten years to 2005, for example, three-quarters of the country's wine export earnings came from Russia, with Ukraine boosting that share to 90 percent. More than two-thirds of the earnings from exports of distilled spirits (brandy and chacha) also came from Russia. The decision by Russia in late March 2006 to ban imports of alcoholic beverages and bottled water from Georgia was therefore a major shock to the country's overall economy, and especially to its rural areas.

The Russian trade ban of 2006 had a profound impact on wine exports, from which it has not yet fully recovered. The share of wine and beverages in merchandise exports had grown from 11 to 15 percent in the first half of the past decade, but in the last 3 years it was only half that share. Water exports also halved. Wine's share of all goods and services exports fell from 5.4 to 1.3 percent between 2005 and 2010, and wine's share of just alcohol exports fell from 73 percent in 2005 to 33 percent in 2007, before recovering slightly to 40 percent in

2010. The export share of wine production (including non-commercial), which grew rapidly during the first half of the decade to almost 50 percent in 2005 fell to just 7 percent in 2007 and is yet to return to even the 1995–99 average of 14 percent. Meanwhile, over the past five years, hazelnuts and tangerines have become the next most important agricultural exports

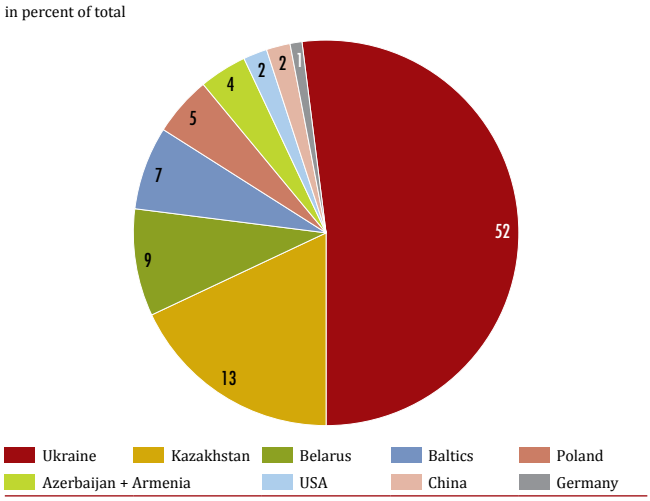
A striking and encouraging result of the Russian embargo is that Georgia's wine exports, while declining in quantity, have risen in quality. Wine's average export price was only US$1 per litre in the late 1990s and $2 during 2000–05, but by 2008 it averaged $3.50 and, despite the global financial crisis, was as high as $3.20 in 2011.

Figure B.3: Destination of Georgia's Wine Exports



Source: Geostat.

Figure B.4: Destination of Georgia's Wine Exports, 2010



Source: Geostat.

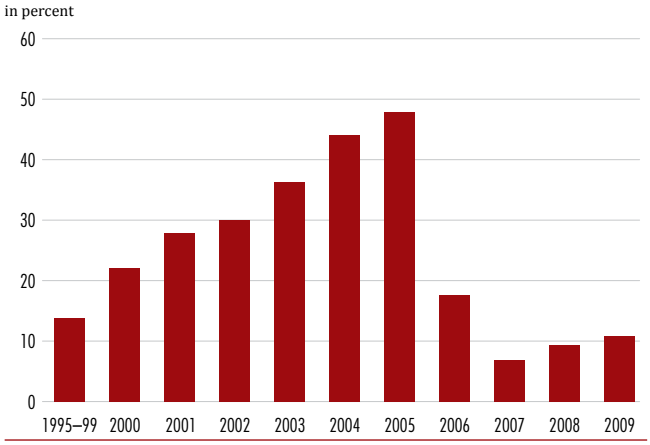
The decline in exports to Russia has meant that the share of wine exports going to other CIS countries has risen considerably. With Russia absent after March 2006, the other CIS countries have dominated. By 2010, half the exports went to Ukraine and another one-quarter to other CIS members. Poland and the three Baltic former Soviet states account for another one-eighth while the United States and China each have a 2 percent share and most of the rest goes to other EU members. Clearly this leaves a great deal of scope for diversifying Georgia's export destinations, since the whole of Central and Eastern Europe plus the CIS (excluding Russia) accounted in 2005–09 for less than 7 percent of the volume of global wine imports compared with more than 90 percent of wine exports from Georgia. The four key markets, collectively accounting for half of the world's wine import volume, are Germany, the United Kingdom, the United States and Belgium/Luxembourg.

Prospects for a recovery in wine exports

An expansion of wine exports from Georgia will require moving the large volumes of lower quality locally consumed wines toward higher quality exportable wines. This will require a corresponding significant upgrade in the industry to serve the potential higher demand in the rest of the world. If one puts aside Russia, then Georgia is a relative latecomer to the tidal wave of wine export growth during the past two decades of globalization. One

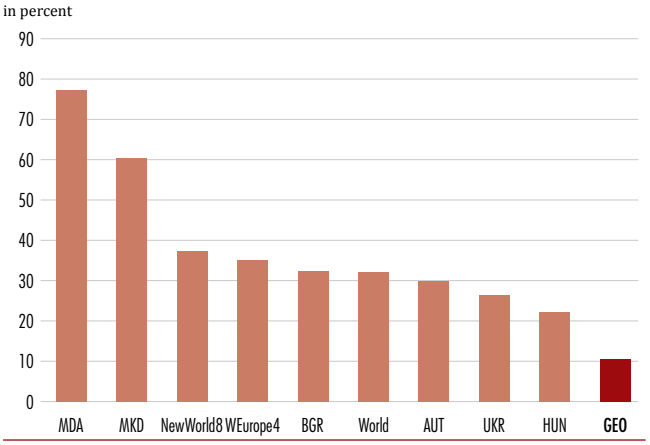
symptom of that is the rise in the share of wine exported by both Western Europe and the New World. The share of EU wine exported has risen from one-sixth to more than one-third since the late 1980s. Far more dramatic, however, is the rise in that share for the New World, from just 2 percent to almost 40 percent. Hence one-third of the world's wine is now consumed outside its country of production. For Georgia, its share of just over 10 percent is much lower than for most of its East European wine-producing neighbors. As noted in the next section, being a latecomer to Western markets can have some benefits in addition to well-known challenges.

Figure B.5: Export share of wine production, Georgia



Source: Anderson and Nelgen (2011).

Figure B.6: Export share of wine production, 2009



Source: Anderson and Nelgen (2011).

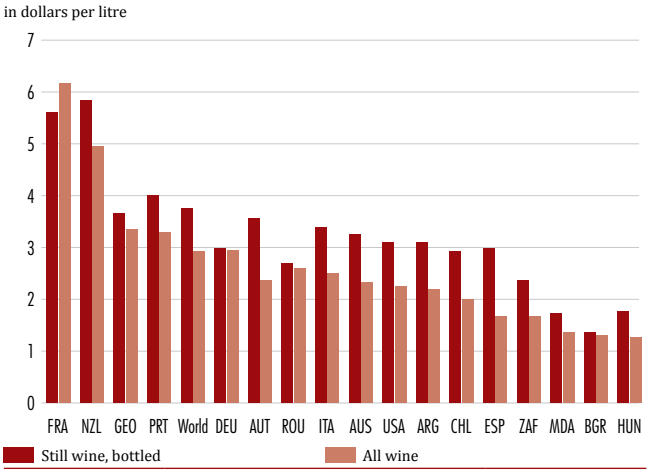
The recent experience of several New World countries that experienced rapid growth of wine export from very low bases is encouraging for Georgia. In Argentina's case, the value of its wine exports (in current US dollars) has grown at more than 20 percent per year since 2001, and New Zealand's at 25 percent, following Australia's 19 percent per year growth during the 1990s. Those experiences suggest that it would be technically possible for Georgia to rapidly expand its exports, if enough other supportive conditions are in place.

The recent experience of New World countries shows that rapid export growth can occur without rapid output expansion, by switching production from low-quality domestic consumption to exports. Output expansion is not the only way to achieve export growth. The export growth in Argentina, Chile and South Africa, for example, was possible without greatly expanding production initially because it was accompanied by stagnant or falling domestic demand for wine. In New Zealand, production switched from low-quality wine for domestic consumers to high-quality wine mostly for export, while local demand was met largely by a doubling over the past decade in wine imports: less than 10 percent of New Zealand consumption was from imports in the 1970s and 1980s, but that had risen to more than half by the mid-1990s. As for Australia, its export surge in the 1990s was preceded by a period of gradual decline in production which meant there was idle capacity ready and waiting to be utilized when the Australian dollar fell in value in the mid-1980s—as was also the case for Argentina following its devaluation in late 2001.

Currently Georgia is not dissimilar to Hungary and Bulgaria in having a small share of its wine production exported, but it is very different in terms of having a much higher average price for its exports. Indeed the unit value of Georgia's wine exports in 2009 ($3.33 per litre) was above the global average of $2.92 and within 4 cents of the EU15 average. While that is not as high as those of France or New Zealand, it is among the highest

in the world and well above those of other New World exporters and transition economies. It is also far above Georgia's earlier averages of $1.05 and $1.92 per litre in 1995–99 and 2000–05, respectively. Its bottled still wine export price is only slightly higher (since Georgia exports very little in bulk), but if inflated by the global average 8.3 percent to allow for freight (the gap between fob and cif prices) it amounts to an average import price at destination of $3.96 in 2009. That is very close to that year's global average unit value of bottled still wine imports of $4.05. However, that world average is dominated by the large low-priced UK and German markets: most other significant importing countries have an average import price for bottled still wine well above $4.

Figure B.7 Average price of wine exports, selected countries, 2009



Source: Survey data.

Policies for wine export growth

In order to expand exports of wine significantly, a number of issues will require attention from policymakers and industry representatives. These issues fall in three broad categories. First, a key question that the industry will need to address is which product segments and market destinations to target. Second, a set of issues will need to be addressed with regard to expanding export supplies by, for example, attracting considerable investments to upgrade vineyards and wineries and providing critical collective goods such as viticultural, winemaking, and wine marketing education. Third, a set of issues will need to be addressed with regard to expanding export demand by, for example, a concerted marketing and promotion campaign in the targeted product segments and markets.

A pre-requisite for launching a major marketing campaign is to know which product segments will be targeted. In their Export Market Development Action Plan, the Georgian Wine Association (GWA 2011) has identified at least three broad quality segments in foreign markets for dry light still wine:

- non-premium wine, typically sold in bulk;
- popular premium wine attractive to newcomer consumers, mostly retailed in bottles; and
- super-premium or fine wine, always exported in bottles.

These three segments in 2009 accounted for 37, 50 and 7 percent of the volume of global wine imports, respectively (with sparkling wine making up the remaining 6 percent). The average export unit values per litre escalate across that range, from around US$0.90 for non-premium to $3.25 for commercial premium, $6.50 for super-premium and $8.10 for sparkling wine. The challenge for Georgian winemakers is to be cost competitive in supplying into one or more of those market segments—and at something less than those average prices, so as to entice newcomers to try their wine.

With regard to market destinations, GWA has identified six markets it believes are worth targeting initially. These include the world's three largest wine importers (the UK, the US and Germany) plus Ukraine. Poland, and China. Around half of the import volume of Germany and China is non-premium (as is also the case for Russia), compared with just one-quarter for the other three. However, the average price of Georgian exports is a little above the average of the commercial premium category, and Table 5 suggests that finer wine segment ('super premium') comprises a very small share of each of those markets—less than 5 percent—apart from the US where it was 8 percent by volume and 18 percent by value in 2009. The Wine Association's Development Action Plan recognizes the marked differences between those markets and suggests the price points, varieties and styles of Georgian wines that might best be targeted in each market. Consistent with many other analysts, it suggests aiming for the low end of super-premium sales in all six countries, plus also the diaspora market in the US and Germany.

Most small vineyards also would require substantial upgrading before they could produce the grapes needed by a modern export-focused winery. For example, denser spacing of vines might be needed to raise grape quality; different varieties or even different clones may be needed before a contract is offered by a winery to a grower; and even then the winery may require a change in management practices to ensure the grapes suit the style of wine for which they are to be targeted. The fact that so many Georgian farmers are struggling to sell their surplus grapes and yet new wineries are planting their own vineyards is an indication that the current grape output of smallholders is not meeting the needs of export-focused wineries. In addition to upgrading vineyards, the irrigation infrastructure also needs major improvements if it is to support production in dry years.

In short, considerable investment is needed if Georgia's exportable surplus of wine is to expand substantially. This is not very different from the situation faced by all the New World countries that chose to rapidly expand their wine exports over the past decade or two. In Australia's case, the industry attracted the required investment funds by developing a shared 30-year vision for the industry's future called Strategy 2025 (AWF 1995). At the time the targets in that document were considered by many observers as rather optimistic, since they involved a three-fold increase in the real value of wine production, 55 per cent of it for the export market. Yet so convincing was that document, and so intense and rapid was the subsequent investment, that the industry was more than half-way towards most of its 30-year targets in just six vintages (leading to excessive production in the subsequent decade – see Anderson 2011).

Equally importantly, a number of collective goods will be needed at an industry level. There is an evident shortage of skilled viticulturalists, winemakers, and wine marketers capable of working together with growers to ensure a saleable product can be delivered on time and at the right price point to prospective markets abroad. Thus, collective goods needed include targeted viticultural, winemaking and wine marketing education plus extension and leadership skills development. Furthermore, grape and wine research and development (R&D) and more statistical data collection and up-to-date dissemination are needed (especially on the pace and nature of expansion in vineyard and winery capacity, as an aid to investors and so as to avoid the excessive exuberance in investment that Australia experienced in the ten years following the release of its 30-year plan, which contributed to the subsequent decline in its average export price.

In order to expand export demand, a concerted generic promotion campaign is needed to support private sector promotion, particularly in markets unfamiliar with Georgian wine. The experiences of other small economies provide guidance as to what works well. Chile (www.winesofchile.com) and New Zealand (www.

nzwine.com) are good examples. So too is Austria (www.austrianwine.com), a country in which, like Georgia, the majority of grape growers have less than 1 hectare of vines. All three countries have sought to associate their wines with their country, and to emphasize the clean, green image of their beautiful vineyards against a background of snow-capped mountains—something Georgia can surely emulate.

Austria provides also a lesson on the importance of protecting the generic reputation of a country's wine. In 1985, a small proportion of Austrian wine was found to have been adulterated with a harmless but illegal additive to add body and sweetness. Austrian wine exports plummeted by four-fifths within a year, and took more than a decade to recover. That recovery process has been characterized by raising the quality as well as image of Austria's exports (Carter 2011). As a consequence, during the past decade the unit value of those exports has doubled. This underscores the importance of Georgia keeping in place sound procedures for testing the quality before approving the export of wines labeled 'Made in Georgia'.

New Zealand has done well in promoting images of its countryside even though most of its customers in the northern hemisphere have not visited such a distant place. That is good news for Georgia because, even though it is on the edge of Europe, to those living near the north Atlantic it is still considered remote (infrequent flights, unfamiliar airlines, troubled borders). If images can substitute for reality, they can buy time for Georgia to build its wine tourism (see next sub-section).

Governments in wine-producing countries often finance the industry-level collective goods and generic promotion campaigns, although the degree of intervention varies (generally depending on the maturity of the industry). Governments in the most successful recent cases (e.g. New Zealand, Chile) did not directly provide these goods. Rather, they developed Public-Private Partnerships with the industry under institutional arrangements that limited state involvement and included sunset clauses. If the government feels this activity would have too few spillover benefits beyond the wine industry to justify full public funding, then one possibility is to collect a small levy on all exported wine. That levy could then also be used to help fund generic promotion and to cover the cost of inspecting a sample of each wine destined for export (an essential activity required to ensure that only wine of sufficient quality is allowed to carry the words 'Made in Georgia' on its label).

Experience in New World countries suggests there may be economies of scale for a small country to combine the roles of promotion, R&D and regulatory oversight in one industry-owned organization, as in New Zealand. Then the returns from those three activities can be compared and the budget divided so as to maximize its overall return to the industry—and to the government, if it also is a financial stakeholder. Australia is moving to combine its generic promotion and R&D funding institutions (expected by end-2013).

As to how much should be spent on generic promotion and on R&D, Australia and New Zealand each spend close to 1 US cent/litre on generic promotion and associated regulatory functions, while Australia spends about 2 cents/litre on R&D (compared with about 1 cent in New Zealand). So if Georgia were to emulate that spending pattern, with its annual production of nearly 100ML per year that would suggest an annual budget of $1 million/year on generic promotion and $1-2 million/year on R&D and related extension activities initially—and to grow that budget in parallel with the industry's output.