Georgia Compact

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MILLENNIUM
CHALLENGE CORPORATION
UNITED STATES OF AMERICA

Table of Contents

Introduction

In September 2005, the Millennium Challenge Corporation (MCC) and the Government of Georgia (GoG) signed a five-year, $295.3 million compact, which was later increased to a $395.3 million compact. The compact aimed to improve the lives of the poor in regions outside the capital city, Tbilisi, by helping them integrate economically through improved access to jobs and markets, more reliable access to basic services, and access to capital for enterprise development. The compact consisted of two projects:

- The **Regional Infrastructure Rehabilitation Project ($310.7 million)** aimed to rehabilitate key regional infrastructure by improving transportation for regional trade, increasing reliability of the energy supply, and improving municipal services. This project included three activities: (i) Samtskhe-Javakheti Road Rehabilitation (SJRR), (ii) Energy Rehabilitation, and (iii) Regional Infrastructure Development.
- The **Enterprise Development Project ($47.5 million)** aimed to increase profitable investments in small and medium enterprises (SMEs) and improve the economic performance of agribusinesses. This project included two activities: (i) Agribusiness Development and (ii) Georgia Regional Development Fund (GRDF).

At the time of compact signing, the GoG and MCC expected 4,591,582 people would benefit from the investment over 20 years.

MCC's Board of Directors (Board) selected Georgia as eligible to develop a compact in May 2004. The compact was signed on September 12, 2005, and entered into force on April 7, 2006. Several months after the Russia – Georgia conflict in November 2008, and as part of a larger USG assistance package to Georgia, MCC increased the funds available through the Georgia Compact to $395.3 million. The additional funds allowed MCC and the GoG to complete works in the SJRR, Regional Infrastructure Development, and Energy Rehabilitation Activities, as well as covered additional costs resulting from the dramatic, global rise in oil, increased construction prices and the fall of the dollar.

Under MCC's country ownership model, MCC's country counterparts are responsible for implementing MCC-funded programs. Partner governments establish accountable entities known as Millennium Challenge Accounts (MCA) to manage implementation for compact projects. As a part of compact development, MCC and the GoG created the Millennium Challenge Account Georgia (MCA-Georgia) to implement the country's program.

Upon compact completion on April 7, 2011, the GoG had spent 98 percent of the revised compact budget.

Through the Regional Infrastructure Rehabilitation Project, 220 kilometers (approx. 137 miles) of roads were rehabilitated, reducing travel time along the length of the Samtskhe-Javakheti road from 8 hours and 13 minutes to a mere 2 hours and 42 minutes. As a result of this project, overall savings in both time and vehicle operating costs were over $13 million. Additionally, more than 67,000 people received improved water services, and 22 key sections of the main trans-shipment pipeline for natural gas through Georgia, between Russia and Armenia, were rehabilitated, resulting in safe, improved regional and municipal gas delivery service. Three independent evaluations were commissioned for this project, one measuring the impact of the SJRR Activity, the second independently assessing the cost-benefit analysis of the Energy

Rehabilitation Activity, and the third assessing the Regional Infrastructure Development Activity. The impact evaluation for the SJRR Activity found strong evidence that the road rehabilitation increased the number of vehicles using the roads and the speed of those vehicles. The independent cost-benefit analysis that reviewed the Energy Rehabilitation Activity after its completion found the projected economic rate of return, originally estimated at 11.7 percent, actually resulted in a rate closer to 7.7 to 9.2 percent. The third proposed evaluation for the Regional Infrastructure Development Activity was cancelled due to limited ability to detect impact , challenges in structuring the evaluation, and changes in project plans.

The Enterprise Development Project supported 290 agribusiness projects and farm service centers created 3,472 jobs, and improved data reporting as of July 2011. Businesses reported a total increase in wages of almost $4.9 million, an increase in firm income of over $3.8 million, and gross revenues of companies in the portfolio increased by over $16.8 million. Two evaluations were conducted—one assessed the Agribusiness Development Activity, while the other evaluation appraised the performance of the Georgia Regional Development Fund. An independent performance evaluation was completed for the Agribusiness Development Activity and found grant recipients reported increased investment, especially in agricultural equipment and machinery, and quantitative data confirmed greater ownership of agricultural equipment and machinery. An independent performance evaluation of the Georgia Regional Development Fund found that investments' performance was mixed, with performance ranging in terms of improved local economic growth and employment across the portfolio of firms. The evaluation found the investment fund manager was unable to exit many investments within the five-year wind-down window, and several investments underperformed despite being operationally sound or having improved underlying companies. As of the end of 2016, the independent evaluator estimated the economic rate of return to be -6.1 percent due mostly to the number of companies delaying or not achieving loan repayment.

This report provides a summary of the tangible outputs of the compact program, document changes in compact activities and the reasons behind those changes, detailed information on performance against targets in the monitoring plan and a summary of the results of the independent evaluations.

Country Context

After the collapse of the Soviet Union and Georgia's civil war in the 1990s, Georgia faced regional instability, civil conflict, infrastructure deterioration, enterprise and investment decline, and a decrease in human capital productivity. The country's economy contracted dramatically, shrinking more than any other former Soviet Republic. Immediately following Georgia's non-violent Rose Revolution in November 2003, the Government of Georgia (GoG) undertook a wide array of initiatives and reforms to promote stability, transparency, good governance, and private enterprise development.

When Georgia was selected as eligible to develop a compact in 2004, agriculture played a major role in the country's economy. Over half the working-age population was engaged in agriculture as their primary form of employment. These farmers faced a host of obstacles, particularly after privatization of collective farms in the 1990s, resulted in Georgia becoming a country of small private land holdings with plots averaging less than one hectare. Farming at a scale of less than one hectare per plot translates to primarily supporting subsistence agriculture. Both farmers and agribusinesses were struggling to compete in regional markets, and the infrastructure needed to bring goods to market and facilitate trade and economic growth had crumbled. Persistent budget shortfalls, corruption, scrap metal looting, and further technical and educational support took a steep toll on Georgia's road, water, energy, and railroad infrastructure.

As one of MCC's first partnerships, the Georgia Compact predates MCC's use of the constraints analysis in the compact development process. [1] Instead, Georgia's 2003 Poverty Reduction Strategy Paper (PRSP) and the *Strategic Vision and Urgent Financing Priorities, 2004-2006* (Strategic Vision) served as the foundation of the MCC investments. The PRSP described the macroeconomic, structural, and social policies and programs needed to boost economic growth and reduce rates of extreme poverty. Among its priorities, the PRSP specifically targeted the development of priority sectors of the economy, namely energy, transport, communications, agriculture, and tourism. The PRSP noted that poverty in the rural regions was closely tied to the lack of financial resources and the underdevelopment of infrastructure, which together reduced the ability of the poor to access jobs and services such as energy, healthcare, and education.

In June 2004, the GoG presented its Strategic Vision,which reinforced the priorities set out in the PRSP with five main areas of action. Of note were efforts to rehabilitate the energy sector, stimulate private sector development, and promote sustainable development in the rural regions through a focus on infrastructure, trade and transport, and agriculture.

Shortly after being informed of its eligibility for MCC funding, the GoG developed a list of priority areas for economic development and began soliciting feedback from a wide variety of civil society actors. Selection of the project areas was based on a nationwide, broad, meaningful, and participatory consultative process and was led by a working group representing key government stakeholders, civil society, NGOs, and businesses in Georgia.

The GoG organized regional forums and community roundtable sessions and sponsored public comment boxes, television advertisements, radio and television talk show programs, brochures, and a documentary film as part of their consultative process. Following initial outreach, which resulted in more than 500 proposals submitted to the GoG, specific proposals were prioritized based on their likely economic impact, role in reducing poverty, and connection to policy reform goals. The GoG found a strong consensus in favor of interventions in agriculture and food processing, infrastructure, and tourism, areas around which the GoG then developed an initial project proposal. In March 2005, the Millennium Challenge Georgia Fund (MCG), in charge of implementing the compact, held a public meeting for small and medium enterprises with the Georgian Federation of Businesses. MCG reached out again in April to explain its proposal for the Samtskhe-Javakheti road, gas supply pipeline, and the regional infrastructure development facility directly to stakeholders in those project activities.

Georgia's compact development process was conducted prior to MCC's adoption of the Gender Policy (2006) as well as MCC's Gender Integration Milestones and Operational Procedures (2011). These documents describe the institutional mandate and operational requirements to integrate gender and social inclusion from the beginning of the compact development phase throughout implementation. Since the Georgia Compact was one of MCC's first partnerships, it did not benefit from MCC's current approach to social inclusion and gender equality. Consequently, MCC's compact development process did not incorporate an analysis or more fulsome discussion of the distributional impact of the investments and differentiated socio-economic outcomes of this compact.

At a Glance

- Original Compact amount:
  $295.3 million
- Amended Compact amount:
  $395.3 million
- Amount spent:
  $387,178,519.76

- Signed:
  September 12, 2005
- Entry Into Force:
  April 7, 2006
- Compact Amendment Date:
  November 20, 2008
- Closed:
  April 7, 2011

- 4,591,582Estimated beneficiaries at compact close over 20 years
- $112.2 million (2005 USD)Estimated net benefits at compact close over 20 years [2]

Estimated benefits at compact close correspond to $395.3 million of compact funds, where cost-benefit analysis was conducted.

- M&E Plan
- Final Performance Indicators
- Compact Agreement
- Compact Amendment

Regional Infrastructure Rehabilitation Project

Project Summary

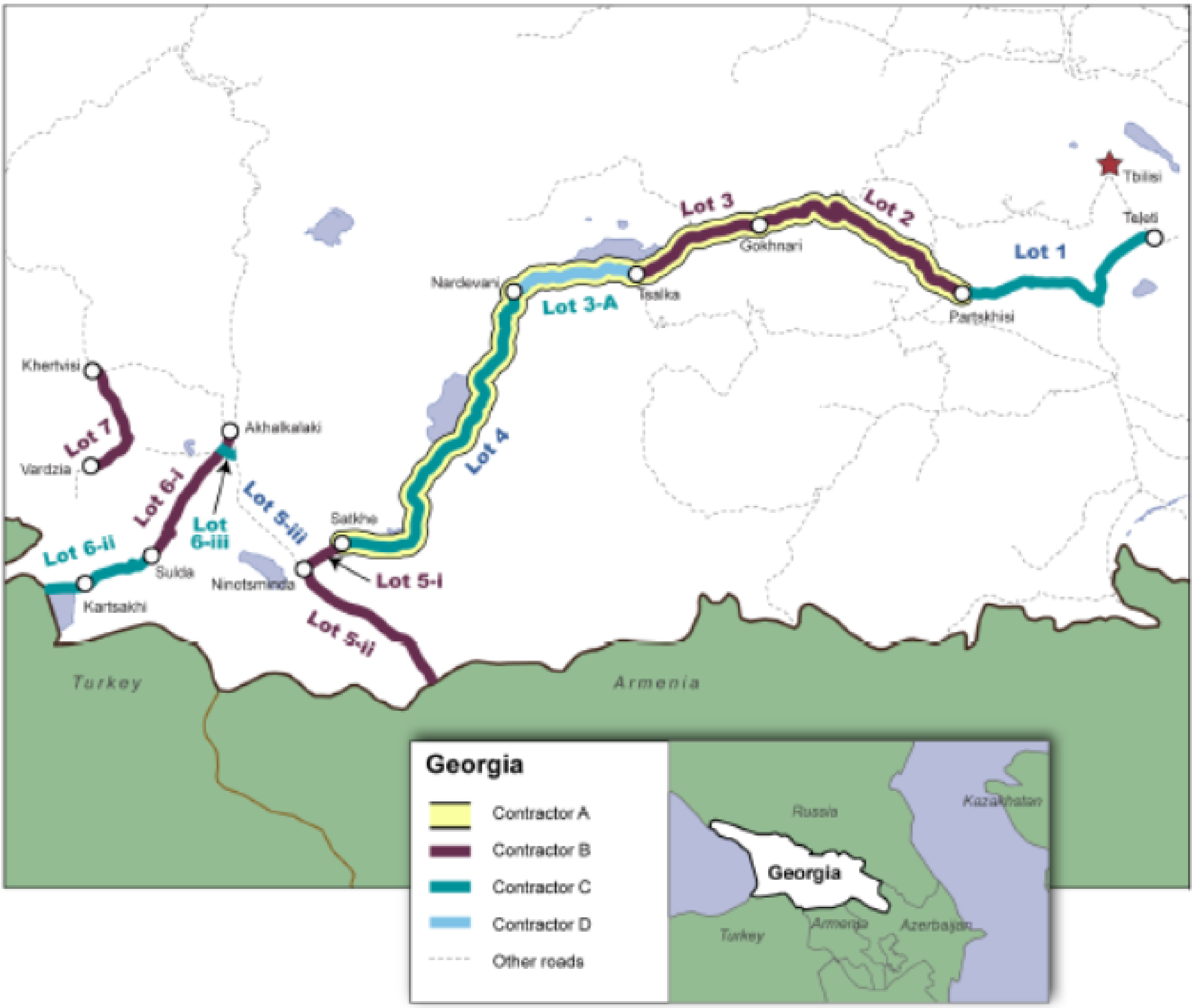
Dilapidated infrastructure—especially the poor condition of roads, unreliable gas and electricity supply, and deteriorating municipal services—was consistently identified through the consultative process as a major impediment to economic growth in Georgia. The **Regional Infrastructure Rehabilitation Project** aimed to rehabilitate key regional infrastructure by improving transportation for regional trade, increasing the reliability of the energy supply, and improving municipal services in the regions outside of the capital of Tbilisi through three activities: **Samtskhe-Javakheti Road Rehabilitation (SJRR) Activity**, the **Energy Rehabilitation Activity**, and the **Regional Infrastructure Development (RID) Activity.**

Samtskhe-Javakheti Road Rehabilitation Activity

The **SJRR Activity** (original budget: $102.2 million; revised budget to $162.2 million with a final total disbursed: $212.8 million) targeted the rehabilitation of approximately 220 km (approx. 137 miles) of poorly maintained local roads into a key national and regional route, linking the capital of Tbilisi to an underserved agricultural corridor in Georgia's southwest, as well as to Armenia and Turkey. [3] At the time of compact development, the Samtskhe-Javakheti region was one of the poorer regions of Georgia, with a per capita income significantly below the national average and a high dependency on subsistence agriculture. In southern Georgia, deterioration of the roads had cut the region of Samtskhe-Javakheti off from the rest of the country. With high costs to transport produce out of the region, local farmers were unable to compete with farmers elsewhere. Moreover, the poor road infrastructure also created significant obstacles to importing agricultural inputs and other goods. Rehabilitation of roads in the Samtskhe-Javakheti area was thus expected to foster economic development in the region.

Although successfully completed by the end of the compact, the SJRR Activity proved to be challenging. In April 2007, MCG sought to procure contractors for three lots, each 75 to 80 km (46 – 50 miles) in length. However, the prices quoted exceeded the amount of funding available. As a result, MCG decreased scope, revised the activity into smaller sections, conducted a new procurement, and awarded four total lots to two contractors between March and May 2008.

In November 2008, MCC added $100 million to the compact budget—increasing the funds available through the Georgia Compact to $395.3 million several months after the Russia-Georgia conflict. This increase was part of an overall United States Government effort to support Georgia. It allowed MCG to complete the Samtskhe-Javakheti Road Rehabilitation Activity as originally planned, covering the additional costs resulting from the global rise in oil and construction prices, as well as road engineering design changes. As a result, the scope of the SJRR Activity was increased back to 220 km and MCG awarded three more contracts for the remaining lots.



Source: GAO analysis of MCC and Republic of Georgia's government data, and Map Resources (maps).

MCG SJRR Activity by Lot

Meanwhile, one of the originally selected construction contractors performed poorly, jeopardizing timely completion of over half the road. As a result, certain sections of the road were removed from the contract and awarded to other contractors in 2009. Due to continued poor performance of that same contractor, MCA-Georgia ultimately terminated the contract in August 2010. All remaining roadwork was re-bid to companies committed to completing the work within MCC's five-year timeline. By the end of the compact term 220 km (136 miles) of rural roads were rehabilitated, connecting this isolated region of Georgia to the capital, and facilitating access to international trade with Armenia and Turkey. Although work was completed on all road segments prior to the compact end date, the combination of rushing to complete and working in less-than-ideal weather conditions meant that, in some places, the quality of construction suffered.

Additionally, this project used newly integrated, European design standards, instead of previous former Soviet Union (FSU) standards, for the road rehabilitation. Historically, road design standards in Georgia were those used throughout the FSU and had not been updated since 1984. The FSU standard was not in keeping with modern developments and practices; for example, it gave less consideration to an economic justification, proper drainage, traffic safety, and continuity of road design. The shortcomings of that approach were apparent based on a review of the condition of the project roads in need of rehabilitation.

Prior to the commencement of the SJRR Activity, the Georgian roads agency, with assistance from the World Bank, took the first steps toward introducing modern European practice for technical standards and pavement specifications in Georgia. They settled on the British standard, incorporating newly harmonized EU standards and combining the latest developments in design policies with economic considerations. As a condition precedent for disbursement of the roads activity, the GoG committed to annual increases in state road maintenance to ensure the sustainability of the investment. Georgia fulfilled this commitment, increasing the budget from $33.6 million in 2006 to over $56 million by 2010.

Energy Rehabilitation Activity

The **Energy Rehabilitation Activity** (original budget: $49.5 million; revised to $62.5 million; with a final total disbursed: $45.8 million) aimed to increase energy reliability and security and reduce energy losses throughout Georgia by rehabilitating sections of the North-South gas pipeline system. At the time, that system was the country's primary pipeline for natural gas running from Russia in the north to Armenia, south of the country. Following the break-up of the Soviet Union and with the decline of the Georgian economy, the pipeline was neglected and required a comprehensive rehabilitation program. Under the Energy Rehabilitation Activity, the Georgian Oil and Gas Corporation (GOGC) was designated by MCG as the implementing partner for the project. GOGC was responsible for preparing project designs, environmental assessments, and the technical specifications needed for equipment procurement. The GOGC was responsible for obtaining necessary environmental and construction permits, overseeing land acquisitions, supervising construction and monitoring the progress of the project.

MCG Gas Energy Rehabilitation Project

In July 2006, in partnership with the energy company British Petroleum (BP) [4] and the European Bank for Reconstruction and Development (EBRD), MCG and GOGC oversaw the selection of qualified contractors. In December 2006 and January 2007, two contractors were selected and to undertake the three phases of construction: six sites in 2007 (Phase I), nine sites in 2008 (Phase II), and an additional seven sites in 2009 (Phase III). This phased approach allowed GOGC to assume an increasing level of responsibility with each phase, emerging stronger and more capable of managing the pipeline. By the conclusion of the compact, 22 key sections of the main natural gas trans-shipment pipeline were rehabilitated – replacing damaged pipe at river crossings, in landslide areas, on heavily eroded slopes, and with exposed heavily corroded pipe. In addition, several valves were replaced.

Regional Infrastructure Development Activity

The **RID Activity** (original budget: $60 million; revised to $86.0 million; with a final total disbursed of $51.1 million) was designed to reduce the costs and burdens associated with intermittent, unreliable public utilities. By strengthening the capabilities of ministries and sub-national governmental jurisdictions to plan, develop, fund, construct, and operate regional and municipal projects. [5] The activity provided grants to eligible government entities (local self-government, municipal enterprise, and central government) for the development and financing of infrastructure projects, such as:

- Investment projects for the purchase of machinery/equipment.
- Development projects that cover needed due diligence, such as feasibility studies, environmental studies, and preparation of designs.
- Technical assistance projects that trained and built the knowledge of eligible municipal entities through staff support or training.

MCG had not identified specific projects to be funded at the time the compact entered into force; however, certain parameters for the grants were defined in the compact, and RID projects included: investments in the water supply, sanitation, irrigation, gasification, local roads, and solid waste sectors. Projects, once identified by an eligible governmental entity, had to demonstrate the following: a contribution to economic and social development of the region(s), achieve an economic rate of return above an agreed threshold, be supported by an operations and maintenance plan and budget for a period of at least five years after completion, comply with MCC's Environmental Guidelines, and meet the requirements of an Operations Manual satisfactory to MCC. The size of individual grants was originally planned to vary between $500,000 to $7 million; however, in August 2007, with MCC's approval, the funding limitations were removed to ensure efficient implementation of the projects.

After the compact entered into force, review of RID proposals, and extensive consultations with the GoG, it was decided that water and sanitation were the key sectors for RID's investments. Georgia's water and waste-water systems were in a particularly severe state of disrepair. In many regional cities of Georgia, communities only received water for two-three hours a day with minimal water pressure. Many in the population had to pump water into individual reservoirs to stock a day's supply. From the proposals, five municipal water supply and wastewater collection projects were selected for implementation, based on the needs, projected economic impact, and implementation timeline.

The Municipal Development Fund (MDF), a Georgian government entity which had served as the program implementation unit for the above-referenced World Bank municipal development program, was designated as the RID Activity implementer under a Collaboration Agreement entered into with MCG in 2006. [6]

In determining how best to execute the portfolio of RID projects, MCC sought efficiencies. First, MCG elected not to fund new feasibility studies or engineering designs for investment sub-projects. Given the five-year timeframe of the compact and its objective to leverage its funds, MCG selected projects already conceived and designed by the European Union, the European Bank for Reconstruction and Development (EBRD), and the Swedish International Development Cooperation Agency.

Second, to leverage compact funds, MCC and MCG often financed projects in parallel with other institutions such as EBRD. With prior MCC approval, MCG entered into parallel financing agreements with the EBRD for three municipal water supply projects. Based on the procurement plans for these three sub-projects, MCG contributed roughly 50 percent of the total combined costs, thereby benefiting from leveraging donor and GoG contributions.

Lastly, rather than duplicating what was already in place, MCC and MCG contracted for oversight with organizations best suited to the task. The RID Activity was unique for the extent of cooperation among MCG and other international donor organizations. RID Activity implementation differed from the standard compact implementation and oversight model in that MCG entered into a service agreement with the World Bank. The World Bank monitored the MDF's compliance based on the Operation Guidelines (approved by MCC), reviewed, and issued approvals to all steps of the procurements on certain RID projects, and monitored adherence to MCC Environmental Guidelines. For those projects jointly funded with EBRD, EBRD reviewed and approved the projects' procurements and compliance with its environmental guidelines. Although based on the procedures of the World Bank and the EBRD, procurements were conducted in substantially the same manner as those conducted in accordance with the MCC Program Procurement Guidelines. And, at all times, MCC retained its rights of oversight, inspection, and audit.

The main projects funded under the RID Activity were the Poti, Kutaisi, Kobuleti, Borjomi, and Bakuriani municipal water supply and wastewater collection projects, plus a number of studies and designs for other projects that could be funded by other donors.

MCG RID Sub-Project Sites

The water and sanitation projects solved some critical infrastructure needs in all project cities, and generally advanced each city's water supply and wastewater management. The RID projects generally helped to reduce electrical consumption in their respective cities through improved well pumping and pump station system improvements. The RID Activity achieved 24-hour water supply in three out of the five cities. These three cities—Kobuleti, Borjomi and Bakuriani—were the main tourist destination cities in Georgia, and tourism was a fast-growing sector of the economy in Georgia. Implementers cited that RID projects in these cities improved conditions for the development of tourism and small and medium-sized businesses, which they hoped would lead to income generation, reduced costs, and improved living standards. Reduced risk of water-borne diseases was also an outcome expected by implementers and residents, as new water treatment plants were installed in Borjomi and Bakuriani, and water treatment plants were significantly improved in Kobuleti. As part of the water systems rehabilitation, the RID Activity also provided technical assistance to improve water utility management, operations, and maintenance to water companies and municipalities.

Ultimately, the RID Activity encountered difficulties in implementation. The activity undertook municipal water projects in a sector that had been long neglected, and the original expectations of what could be accomplished with the existing budget and within the available timeframe were set too high. In two of the five cities (Poti and Kutaisi) where the activity funded investments, sub-standard designs required multiple revisions, and extra efforts were needed to help ensure that the works were completed on time. It also became obvious that it was impossible to achieve the original goal of 24-hour water supply throughout these two cities due to budget constraints and the amount of work for full rehabilitation. In Kutaisi, water supply and delivery improved and some cost efficiency was achieved, as the pumping systems were replaced. However, 24-hour water supply and full rehabilitation was done in only the most impoverished part of the city, and most of the city did not achieve continuous 18-hour supply. In Poti, the project failed to increase water supply significantly and only improved distribution on a small number of streets.

After the compact ended, the GoG continued investing in Kutaisi water supply systems through support from the Asian Development Bank. The GoG decided to consolidate the fragmented municipal water supply into a new United Water Supply Company of Georgia LLC established in 2009-2010. Under a $500 million Asian Development Bank commitment in 2011 for the water sector, the United Water Supply Company of Georgia LLC (UWSCG) worked to optimize the investments within the long-term needs of the cities [7] . With a more holistic approach in mind, the UWSCG decided that a large block of funding for city water/sewerage problems would be better than the piecemeal approach adopted in the past. Additionally, given the environment of constrained financing, the UWSCG continues to extend water services to more cities throughout Georgia with funds received from other donors.

Project Economic Analysis

- $310 700,000 millionCompact Project Amount (including amendment)
- $309,899,714.29Total Disbursed

Estimated benefits correspond to $309.9 million of project funds, where cost-benefit analysis was conducted:

- Estimated beneficiaries at compact close: 4,591,582
- Estimated net benefits at compact close: -$646,253

Estimated Economic Rate of Return:

At the time of compact signing, economic rates of return (ERRs) were calculated for the SJRR Activity, the Energy Rehabilitation Activity, and the RID Activity. Estimated benefits at the time of signing come from original ERRs and correspond to the original $211.7 million of project funds, where cost-benefit analysis was conducted. All three activity-level ERRs were updated at compact closure.

		Estimated Economic Rate of Return	Estimated Beneficiaries	Estimated Net Benefits [8]
Samtskhe-Javakheti Road Rehabilitation Activity(over 24 years)	**At the time of signing**	20%	58,079	$65,592,969
	At compact closure	15%	58,079	$55,771,982

		Estimated Economic Rate of Return	Estimated Beneficiaries	Estimated Net Benefits [8]
Energy Rehabilitation Activity	**At the time of signing (over 10 years)**	11.7%	4,591,586	$2,641,184
	At compact closure (over 45 years)	7.7%	Not estimated	-$9,560,406
Regional Infrastructure Development Activity	**At the time of signing (over 19 years)**	12%	263,950	$13,273,989
	At compact closure (over 25 years)	0.7%	67,865	-$46,857,829

Key Performance Indicators and Outputs at compact end date

Indicators	Baseline (2006)	Actual Achieved (2011)	End of Compact Target (2011)	Percent Complete [9]
Samtskhe-Javakheti Road Rehabilitation Activity				
Savings in vehicle operating costs	0	13,770,000	13,117,000	105%
International Roughness Index [10]	16.6	1.5	2.5	107%
Annual Average Daily Traffic (Vehicle)	612	1,092	1,183	84%
Travel Time (Hour and minute)	8:13	2:42	2:45	101%
Kilometers of roads completed	0	220	220	100%
Energy Rehabilitation Activity				
Sites Rehabilitated (Phases I, II, III)	0	22	22	100%

Indicators	Baseline (2006)	Actual Achieved (2011)	End of Compact Target (2011)	Percent Complete [9]
Percentage of Construction Works Completed (Phase II)	0	100	100	100%
Collection Rate [11]	47%	113%	95%	119% [12]
Regional Infrastructure Development Activity				
Population Served by all RID sub-activities [13]	0	67,865	265,964	26%

Explanation of Results

As mentioned above, RID projects were identified through public consultations after compact signature. MCG conducted due diligence based on existing feasibility studies and designs developed in the investment proposals for each city which were individually approved by MCC. These investment proposals, as well as initial calculations on the number of people benefiting from the program and ERR estimations, projected 24-hour water supply to nearly the whole population of these five cities. The biggest contributor to beneficiary numbers was Kutaisi, the second largest city by population in the country at that time. After engineering designs were finalized, it became obvious that full rehabilitation of Kutaisi water supply system was not possible, so the project focused only on one neighborhood, which received 24-hour water supply by the end of the compact. The project also rehabilitated the central reservoir and replaced all old Soviet-style pumps with new, energy efficient ones in Kutaisi. This improved the water supply for the whole city, however the indicator for “Population Served by all RID subprojects” only counted those residents that received 24-hour water supply as originally planned, which was only the subsection of the city. In addition, due to the inefficiencies of Poti project designs, the project in Poti did not reach the intended number of Poti residents. Hence, there is a reduction in both population reached as well as household savings. Ultimately, the RID subprojects served 67,865 residents of the five cities, 26 percent of the target.

Evaluation Findings

Under the **Regional Infrastructure Rehabilitation Project,** two evaluations were conducted: one that measured the impact of the SJRR Activity, and the other independently conducted an endline cost-benefit analysis of the Energy Rehabilitation Activity. The planned Regional Infrastructure Development Activity evaluation was cancelled due to feasibility challenges.

Samtskhe-Javakheti Road Rehabilitation Activity

MCC commissioned an independent impact evaluation for the Road Rehabilitation Activity and the full results and learning can be found on the evaluation catalog and summarized in the Evaluation Brief. The evaluation was designed to answer the following high-level question about the activity: How does the road rehabilitation effect/cause economic development, new businesses, and economic and social integration in the region?

In addition, the following categories of outcomes were explored by the evaluation:

1. Transportation related outcomes: traffic counts, vehicle speeds, travel times, and availability of public transport;
2. Investment, land use, and employment: industrial investment, land uses, cropping patterns, and employment;
3. Market prices: the prices of basic commodities on the local market;
4. Household welfare: income, consumption, and asset ownership; and
5. Access to health and education: utilization of health care and education services.

Key Findings include:

Travel and Transport

- Rehabilitating the Samtskhe-Javakheti road successfully improved travel conditions. Traffic volume and average speed increased, and travel times to both the capital city of Tbilisi and local markets decreased.

Industrial Investment, Land Use, and Employment

- The improved roads significantly increased industrial investment in nearby communities.
- There were no observable changes in cropping patterns or agriculture land use at the community level.

Market Prices

- Local prices of commodities were affected by the improved roads, but in ways that were difficult to interpret in relation to the program's objectives.

Household Welfare

- The evaluation did not find that the improved roads impacted income, consumption, asset ownership, employment, or utilization of health and education services at the household level. However, the timing of the evaluation, which was less than two years after the project concluded, limited its ability to assess impacts on household welfare.

MCC Learning from this evaluation

- Base evaluation decisions on a clear program logic. The decision of when and what data should be collected should be driven by a clear program logic that underlies the investment decision.

- Set realistic time horizons and keep data collection plans flexible. From the beginning, implementers and evaluators should build actions to mitigate risks associated with project delays into the evaluation design.
- Ensure sufficient statistical power to measure realistic changes in key outcomes.
- Include an upfront national or area-wide road network analysis based on selected criteria such as traffic volume, roughness index, and other parameters in the roads project selection process, as noted in the Principles into Practice: Lessons from MCC's Investment in Roads.
- Comprehensively address policy and institutional constraints to road maintenance and seek assurances from the partner government that the necessary mechanisms to ensure sustainability are in place prior to MCC's investment.

Energy Rehabilitation Activity

An independent cost-benefit analysis of the Energy Rehabilitation Activity, which can be found in the evaluation catalog, was completed at compact closeout. The analysis aimed to independently assess the Energy Rehabilitation Activity's ERR after the compact ended. Prior to compact start, the ERR was estimated to be 11.7 percent. The post-compact, independent analysis revised the ERR downward to 7.7 percent. [14] The decrease was largely due to the arrival of alternative gas sources from Azerbaijan and Georgia's reduced dependence on Russian gas.

Regional Infrastructure Development Activity

The RID Activity was the subject of an independent impact evaluation, which was later cancelled. Completed evaluation materials can be found in the evaluation catalog, along with a memo describing cancellation of the evaluation's third and final phase. MCC canceled the evaluation in part because the evaluation methodology and data collection methods were unlikely to credibly measure project outcomes, and in part due to changes in project design throughout the compact. No further external evaluation is expected for the RID Activity.

Enterprise Development Project

Project Summary

While the overall economy in Georgia experienced significant growth during the years preceding the signing of the compact, the performance of the rural economy had stagnated. Of particular concern was the agriculture sector, which accounted for one-quarter of Georgia's economic output and an even larger share of employment. Georgia's diverse climactic zones and rich natural resources provided the potential for future development of the agriculture and agribusiness sectors, particularly in the regions outside of Tbilisi. With increased quantity and quality, Georgian agricultural products were expected to better compete with imported food products, thereby improving the living standards of the rural poor. Yet businesses faced problems with poor technology, processing, marketing, management skills, and credit access.

The **Enterprise Development Project** was designed to address two of the key constraints faced by small and medium enterprises in agribusiness and other sectors in the regions: the need for additional long-term risk capital and the need for improved skills and capacity in enterprises to recognize and take advantage of market opportunities. The project included two activities: the **Agribusiness Development Activity** and the **Georgia Regional Development Fund Activity.**

Agribusiness Development Activity (ADA)

The ADA (original budget: $15 million; total disbursed: $20 million) was designed to improve the economic performance of agribusinesses by accelerating the transition from subsistence to commercial agriculture through technical assistance, targeted grants to farmers and agribusinesses in critical value chains, and expanded market information. The causes of decreased agricultural production were identified as (a) limited access to high quality seed, fertilizers, and plant protection materials; (b) inadequate access to productive assets (e.g., machinery, spare parts, and transport vehicles); (c) limited access to financing; and (d) poor farm management skills. The ADA Activity was designed to address these causes by stimulating the rural economy through agricultural enterprise development that would expand production, improve quality, and add value across the agricultural system.

The program launched with a "value chain approach" to strengthening commercial linkages among agricultural service providers, producers, processors, wholesalers/distributors, and markets. Program activities focused on the provision of grants to farmers and agribusinesses in critical value chains that supply agricultural products to local markets. ADA was implemented by a professional grants manager that awarded grants based on a transparent, open, and competitive application process that required matching contributions from program participants. In addition, the grant manager provided proposal and business development services to applicants and grantees. Originally this was a $15 million activity that received an additional $5 million following a reallocation from the RID Activity.

Technical Assistance

A key element of ADA's technical assistance was the creation of a network of farm service centers throughout the country to supply production inputs and technical advice to groups of local producers. The aim was to provide technical assistance to farm service centers, primary producers, and value-adding enterprises which would lead to increased volumes and values of production. During implementation, it became clear that the activity should reconsider the balance of increased technical assistance versus access to finance. Although a significant amount of funding went towards grants, the project design was weak on technical assistance. While good design would have better balanced the distribution of funding between technical assistance and grants, ADA was able to connect and partner with USAID and SIDA to further focus on technical assistance.

Farmer and Agribusiness Grants

Grants under the ADA program were awarded to four categories of beneficiaries:

1. **Primary Producers:** ADA targeted farmers and farming operations producing fruits and vegetables with improved farming practices; as well as, worked with livestock and cattle-farmers to develop specializeddairy products. Livestock included: beef, pork, and lamb production; poultry and egg production; beekeeping; fish farms and hatchery supports.
2. **Value-Adding Enterprises:** Value-adding enterprises were expected to increase production volume and quality in addition to introducing new and improved technologies and expanding market access. Targeted projects generally fell into two categories: Collection, Storage, and Distribution *(e.g.,* milk collection stations, small-scale vegetable/fruit packing houses, and conventional cold storage); and Processing and Packaging for the Retail Market *(e.g.,* small-scale dairy processing, fruit and vegetable canning, dried fruits and vegetables, slaughterhouses and meat-cutting operations, enterprises adding value to walnuts and hazelnuts, tea processing, and honey processing or packaging).
3. **Farm Service Centers:** Farm Service Centers were profit-oriented, privately-owned legal enterprises designed to meet the needs of Georgian farmers through the supply of inputs; provision of machinery; veterinary, breeding, and agricultural extension services; marketing of farmers' products; provision of market and technical information; and links to credit providers. In early 2009, the Machinery Rings Initiative was added. This additional component provided grants up to $150,000 to existing Farm Service Centers to purchase agricultural equipment that could be rented to farmers to facilitate improved technology adoption. The machinery rings included a set of 3-4 tractors with a range of implements such as plows, cultivators, seeders, fertilizer spreaders, sprayers, and trailers to serve farmers in their areas.
4. **Value Chain Initiative Grantees:** Value Chain Initiative grants focused on key enterprises in "nationally important" value chains. These included input suppliers, service providers, processors, distributors, and other off-farm enterprises that were to build the foundation for a stronger agricultural sector. They were expected to strengthen the rural economy, providing increased opportunities for job creation and income generation.

After nine rounds of reviewing grant applications, the program had over 1400 applicants, awarded 283 grants for a total value of over $16 million. ADA grants awards ranged from beekeeping, cattle and sheep breeding, dairy, feed production, fruit and vegetable production over to processing, nuts and meat processing, fishery, among others.

Market Information

The market information component included a series of activities to disseminate information on agricultural best practices and pricing mechanisms, as well as promoting the other components of ADA. This component of ADA shared costs with USAID's AgVantage project to produce the bi-weekly magazine *Agroinfo*, that provided information on prices and market demand. The cooperation was secured through a Memorandum of Understanding which expired in June 2008. After expiration, MCG conducted a survey to learn of the actual benefit delivered by this activity and decided not to continue funding because of unsatisfactory results.

Georgia Regional Development Fund Activity (GRDF)

The **GRDF** (original budget $32.5 million; total disbursed: $32 million) was a risk capital fund made of loans and equity investments that sought to increase investment in, and improve the performance of, small and medium enterprises (SMEs), particularly in regions outside Tbilisi. The activity created a professionallFy and independently managed investment fund to provide capital to SMEs, offered technical assistance to companies within the GRDF portfolio, and identified legal and policy reforms needed to encourage further investment in SMEs. The investment fund manager reported to an independent GRDF governing board comprised of individuals with financial and development experience acceptable to MCC and MCG. This Board also acted as an Investment Committee and approved every investment or divestment proposal from the investment fund manager. MCC maintained a seat as a non-voting observer on the Board.

GRDF's primary objective was maximization of development returns, defined as a combination of annual changes in four indicators relating to wages, revenue, taxes, and supplier purchases. These indicators were tracked throughout the life of the GRDF. It was also expected to earn a reasonable financial return from investments in SMEs. While the GRDF was open to investment in all sectors, of particular interest were SMEs involved in agribusiness and tourism. The selection process was based on the viability of proposed investment opportunities based on the quality and experience of the management and/or owners, their competitive advantage and market position, and their prospect for dynamic growth, among other factors that contributed to a strong partnership. Investments typically ranged between $500,000 and $3 million and were in businesses that generally had less than 250 employees and less than $5 million in revenue. GRDF investments financed a variety of growth-oriented activities, such as purchase of new technologies, access to export markets, and expansion of production.

The GRDF investment period began upon entry into force (April 7, 2006) and was scheduled for a total of ten years, including a five-year wind-down period after the termination of the investment period. It was planned that any loan repayments from the GRDF loans would be held and re-invested towards charitable, educational, or other nonprofit developmental gains, that benefit people working in agribusiness and/or other enterprises outside of Tbilisi.

GRDF invested a total of $32 million over the full investment period, of which MCC's original contribution of $30 million for loan investments and $2 million for technical assistance to loan recipients. The GRDF reinvested an additional $2 million from early reflows, and also used the reflows to cover management and operational expenses to the investment fund manager.

GRDF's investment performance was mixed, with the investment fund manager unable to exit many investments within the five-year wind-down window and several investments underperforming despite having been operationally sound. The GRDF encountered several challenges during compact implementation, notably the twin shocks of the August 2008 Russia-Georgia conflict and the global financial crisis. The program was designed to finance investments considered riskier than those made by Georgia's commercial banks. GRDF targeted companies that might not have access to in-country financing, and would be willing to take on marginally higher interest rates and/or accept greater equity stakes. Some of the companies in the investment portfolio experienced financial difficulties related to the global economic climate. Additionally, the aggressive job creation targets set at the onset of the compact proved unrealistic for GRDF. GRDF's directives were to invest primarily outside the capital city, and in the tourism and agribusiness sectors, but not specifically in sectors that were labor-intensive. By the end of the wind-down period, the GRDF still had several companies due to exit or liquidate. In 2016, the investment fund manager agreed with the Board to waive its management fees and continue overseeing the GRDF exit pro-bono.

By the end of March 2019, the fund manager reported over $25 million in reflows, from which over $13 million was distributed to the investees, $2 million was re-invested, and the rest was used to pay management and operating expenses. Despite several failed investments, the GRDF interventions had positive effects on economic growth in the form of paid wages and taxes and realized proceeds from debt and equity investments. As of April 2017, GRDF's investments contributed to over GEL 66 million (around $33 million) in wages, GEL 44 million (around $22 million) in taxes, and supported just over 2,400 jobs. [15]

Notwithstanding problems faced, some GRDF investments are expected to have a lasting impact. For example, high-speed fiber internet was delivered in rural areas of the Adjara region to 8,000 retail customers as a result of the GRDF investment in an IT company.

MCC signed a subsequent compact with the GoG on July 26, 2013. The compact included a clause regarding the use of the GRDF proceeds directing they support the activities of the Science, Engineering, Technology, and Math Higher Education Project funded through the compact. In 2015, MCA-Georgia, the accountable entity that implemented the subsequent compact, entered into an agreement with the San Diego State University of Georgia (SDSU-Georgia) to use GRDF proceeds to recruit and provide scholarships for students enrolled into SDSU-Georgia programs, and funded educational exchanges of students and faculty.

Project Economic Analysis

- $47,500,000 million Original Compact Project Amount:
- $52,040,799.99Total Disbursed

Estimated benefits correspond to $52.0 million of project funds, where cost-benefit analysis was conducted:

- Estimated beneficiaries at the time of compact signing: 26,285
- Estimated net benefits at the time of compact signing: $30.7 million

Estimated Economic Rate of Return:

At the time of compact signing, activity-level ERRs were calculated for the ADA and the GRDF. Estimated benefits at time of signing come from original ERRs and correspond to the original $47.5 million of project funds, where cost-benefit analysis was conducted. The ERRs were not updated at compact closeout because supporting documentation was not available. The compact closed before MCC instituted its policy on closeout ERRs.

		Estimated Economic Rate of Return	Estimated Beneficiaries	Estimated Net Benefits
Agribusiness Development Activity (over 10 years)	**At the time of signing**	12%	9,931	$787,344
	At compact closure	Not estimated	14,145	Not estimated
Georgia Regional Development Fund Activity (over 15 years)	**At the time of signing**	26%	16,354	$29,875,848
	At compact closure	Not estimated	3,130	Not estimated

Key Performance Indicators and Outputs at compact end date

Indicators	Baseline (2006)	Actual Achieved (2011)	End of Compact Target (2011)	Percent Complete [16]
Agribusiness Development Activity				
Jobs created	0	3,264	3,377	97%
Firm Income (USD)	0	3,847,492	1,046,000	368%
Household Net Income (USD)	0	12,306,272	4,491,000	274%
Number of Direct Beneficiaries	0	3,585	3,823	94%

Indicators	Baseline (2006)	Actual Achieved (2011)	End of Compact Target (2011)	Percent Complete [16]
Georgia Regional Development Fund Activity				
Increase in Gross Revenues of Portfolio Companies (USD)	0	16,880,669	22,200,000	76%
Increase in Portfolio Company Employees	0	208	1,892	11%
Increase in Wages Paid to the Portfolio Company Employees	0	$1,787,378	$3,118,000	57%

Explanation of Results:

The ADA indicator *Jobs created* includes additional jobs created through ADA investments. A non-zero baseline could not be calculated because the grant manager did not request businesses provide job creation information, and data provided on grant applications were not reliable or verified. This indicator's success cannot be tied directly to the project based on the information that was provided at the time of closeout.

The *Firm Income* indicator included all increases in firm revenues generated after the ADA investment. Because the business line in which the ADA investment occurred was required to be already established, the increased revenues generated from that line were considered as attributable to ADA grant for the purposes of this monitoring indicator. Income from all other business lines were not reported. The Household Net Income indicator includes increases in net wages for additional employees generated by Primary Producers and increases in Household Net Revenues for the Primary Producers (farm-based enterprises). A non-zero (level) baseline cannot be calculated because businesses were not asked to provide that information, and data provided on grant applications were unreliable and not verified. Based on the information that was provided at the time of closeout, this indicator's success cannot be tied directly to the project.

No information was provided in the closeout Indicator Tracking Table to explain why the targets were not achieved for the GRDF indicators *Increase in Gross Revenues of Portfolio Companies* and *Increase in Wages Paid to the Portfolio Company Employees*. Further detail is available in the final evaluation of the GRDF Activity, summarized below.

Evaluation Findings

Under the **Enterprise Development Project,** two evaluations were conducted—one assessing the ADA, while the other evaluation appraised the GRDF.

Agribusiness Development Activity

MCC commissioned an independent performance evaluation for the ADA, and the full results and learning can be found on the evaluation catalog and summarized in the Evaluation Brief. This evaluation was originally designed as an impact evaluation, but was later reverted to a performance evaluation due to data limitations and implementation changes, as described in the evaluation methods section of the Evaluation Brief and the Final Report. The final performance evaluation was designed to answer the following questions:

1. What is the ADA's impact on economic growth and poverty reduction; including household incomes and expenditures, employment, production value (goods and services), value added, investments, and other indicators in agriculture?
2. What is the impact of the project on agricultural productivity and, if possible, income?
3. What is the ADA's impact on net agribusiness revenue, number and type of employees, employee wages, and use of equipment?

Key Findings include:

Investment and Access to Credit

- Grantees used their grants to increase their agricultural equipment and machinery investments.
- Access to credit increased substantially after the grant application opened. Four years later, the number of respondents with bank loans increased for both grantee and non-grantee respondents, with grantees showing an increase of 10 percentage points over non-grantees. Non-grantees refers to applicants, but not recipients of a grant.

Production and Profit

- The majority of grantees and non-grantees reported increases in production levels and profits.
- Grantees frequently indicated technological improvements as the main driver of growth, while non-grantees cited increases in the scale of their operations.
- Grantees did not experience larger increases in profits relative to non-grantees in the years after receiving the grant.

Employment and Wages

- Four years after applying for the grant, both grantees and non-grantees reported increasing their number of employees.
- Both grantees and non-grantees tended to report paying higher wages. After adjusting for inflation, however, wage levels for both skilled and unskilled workers remained relatively constant over time for both grantee and non-grantee agribusinesses.

MCC Learning from this evaluation

- Randomized lotteries are not just tools for impact evaluations. In grant-making programs where demand significantly outpaces supply, a randomized lottery can be an effective tool in addressing transparency and fairness issues in the selection process.
- Align application procedures with the level of sophistication of potential applicants.
- Design processes and procedures for grant administration to mitigate fraud and abuse.
- Involvement of the evaluator in data collection from the beginning is key to a successful impact evaluation.

Georgia Regional Development Fund

MCC commissioned an independent performance evaluation of the GRDF, and the full results and learning can be found on [the evaluation catalog] and summarized in the [Evaluation Brief]. The final performance evaluation was designed to answer the following questions:

1. Did GRDF meet its stated objective?
2. What factors explain the success of the relatively more successful/profitable firms?
3. What barriers/challenges explain any underperformance noted in GRDF portfolio firms?
4. What were some indirect effects of GRDF investments?
5. To what extent has the GRDF investment been essential for SME development and for their access to finance?
6. Did GRDF provide financing that wouldn't have been accessible otherwise?

Key Findings include:

Financial Performance

- The GRDF portfolio companies' financial performance was mostly poor. The overall Internal Rate of Return was estimated at -14.22 percent.
- 12 out of a total of 14 GRDF investees ran into financial difficulties and fell behind on debt payments.

Development Returns

- The GRDF inconsistently impacted development returns.
- Only half of the 14 companies had positive returns, while the other seven were negative or zero.

Economic Growth and Employment

- Of the 14 GRDF investees, four were successful in boosting economic growth and employment in the regions outside Tbilisi, while another four eventually became insolvent. The remaining six showed mixed performance. Those that were successful were generally able to attract outside sources of private investment.
- GRDF investments helped create 3-4 transformational companies in Georgia with positive externalities. This confirms that private equity is well suited to provide patient capital and can be a market-friendly way of providing grants to countries.

MCC Learning from this evaluation

- Measuring and attributing non-financial outcomes of an investment fund proved to be difficult. Moreover, the emphasis on development return to determine a portion of the fund manager's compensation incentivized short-term performance over long-term value creation and ultimately led the fund manager to take riskier investments that were not necessarily financially sustainable.
- The five-year time limit on MCC compacts creates a number of challenges in the design of investment funds. Even though it was extended ten years beyond the compact period, the GRDF encountered difficulties in liquidating its portfolio in a timely manner and the inability to intervene in the post-compact period introduced reputation and other risks.
- Potential synergies between compact components could have been more adequately exploited to increase the probability of success. Expanding the role and size of the Technical Assistance Facility may have helped improve business viability and build SME capacity prior to and during investment. Additionally, if the ADA was given more lead time to address the primary agriculture market, GRDF investments in the secondary agricultural market may have been more successful.

Compact Changes

- Several months after the Russia-Georgia conflict, the MCG received an additional $100 million in MCC funding as part of an overall United States effort to support Georgia, bringing the compact total to $395.3 million. This increase allowed MCG to complete works in the Roads, Regional Infrastructure Development, and Energy Rehabilitation Activities contemplated by the original compact, as well as covered additional costs resulting from the dramatic, global rise in oil and construction prices. By the end of the compact, $98,199,714 was added to the Regional Infrastructure Rehabilitation Project, $4,540,800 was added to the Enterprise Development Project, and $7,489,381 was removed from Program Administration and $3,372,613 from Monitoring & Evaluation activities.
- The RID Activity was originally designed to be an infrastructure project preparation and financing facility, in which compact-funded grants would finance 35 percent, up to $7 million, of a limited number of individual municipal infrastructure investment projects, up to a total of $60 million. The RID Activity's original design sought to encourage leveraged financing and a limited number and type of municipal infrastructure projects. However, large scale water systems were identified as a priority during the consultative process after entry into force, and the GoG also had feasibility studies for these systems already completed through other donor funding, which was important taking into account MCC's five-year model. Due to this, sixteen months into the compact, MCC lifted the funding cap to allow for a higher proportion of compact funding, for fewer projects, and focused all RID investment in the water supply and irrigation sectors.

Coordination and Partnerships

MCG elected to work with GOGC, the implementing entity for the Energy Rehabilitation Activity. GOGC, a young domestic institution at the time, was responsible for designing and managing all pipeline repairs under the compact. GOGC is now the party responsible for the operation and long-term sustainability of the MCC energy rehabilitation investment. MCC supported operational and financial improvements at GOGC before and during construction. The MCC model has been used by USAID, which signed a contract with GOGC to manage a $70 million investment to further rehabilitate the national natural gas distribution network.

The implementing entity agreement between the MCG and the Georgia Department of Statistics (now GeoStat) helped to improve the quality of survey implementation. Initial improvements were observed in survey processes and metadata collection, improved IT equipment and architecture to conduct survey work, and capacity built in collecting, maintaining, and analyzing data. The surveys implemented through MCG funds represented a replicable model for improved data collection methods, which increased confidence in GeoStat's data collection for their own purposes and for the purposes of international donors.

RID water projects were funded in parallel with the European Bank for Reconstruction and Development (EBRD), and the EBRD and the World Bank each provided technical assistance and oversight of the Municipal Development Fund, the implementing entity which was a former World Bank Project Implementation Unit in the preparation of individual projects. MCC relied on EBRD environmental standards and procurement processes for the relevant projects.

Although not a partnership per se, following compact closeout the Asian Development Bank entered the Georgian water sector and carried on with many of the municipal water projects funded under the compact. In addition, responsibility for maintaining the RID Project after the end of the compact was transferred from the Municipal Development Fund to the new Georgian water company, the United Water Supply Company of Georgia.

Key Conditions Precedent

Key Conditions Precedent (CP)

Key Compact Component(s)	Major CP or Policy Reform Required	Rating: Met on Time/Deferred/Met Late/Not Met
Regional Infrastructure Rehabilitation Project, Energy Rehabilitation Activity	Prior to the first disbursement for Pipeline rehabilitation, the Ministry of Energy will provide documentation satisfactory to MCC outlining the Ministry's plans and strategy for resolving the following four issues currently facing GGIC: (A) Kazbegigazi non-payment to GGIC; (B) Tbilgazi non-payment to GGIC; (C) Physical gas losses by GGIC; and (D) GGIC's tax liabilities.	Met on time
Regional Infrastructure Rehabilitation Project, Energy Rehabilitation Activity	Prior to any disbursement for the Project Activity after the initial disbursement MCC is satisfied that the Government has developed and is maintaining a continuing Pipeline rehabilitation program, if applicable utilizing operating cash flow and carbon credit financing, as applicable.	Met on time
Regional Infrastructure Rehabilitation Project, Energy Rehabilitation Activity	MCC is satisfied that GOGC maintains a collection rate (defined as the percentage of sales collected for all services provided in the form of cash payments (which cash receipts may include proceeds from the sale of gas taken as payment in kind for transmission services)) of at least 95% for each of the two immediately preceding consecutive calendar quarters.	Based on ITT, exceeded
Regional Infrastructure Rehabilitation Project, Regional Infrastructure Development Activity	Prior to any semi-annual disbursement for the Project Activity, starting in Year 2 MCG provides confirmation that any Government commitment(s) to	Met on time

Key Compact Component(s)	**Major CP or Policy Reform Required**	**Rating: Met on Time/Deferred/Met Late/Not Met**
	support Operations & Maintenance or debt service (as applicable) on completed projects are being honored, to the satisfaction of MCC.	
Regional Infrastructure Rehabilitation Project, SJRR	Prior to initial disbursement for the Project Activity in any fiscal year, MCG provides evidence that (i) the national budget for routine and periodic maintenance for the maintainable road network has been approved for the forthcoming fiscal year at the levels stipulated in Compact Schedule 1, § 6 (a)(i)(3), (ii) the amounts budgeted for routine and periodic maintenance in the prior fiscal year have been expended for the intended purpose and (iii) that any shortfall in the road maintenance budget from the prior fiscal year has been made up in the budget of the current fiscal year.	Met on time
SJRR	Prior to any disbursement for construction on any road segment in Year 4 or Year 5, MCG provides evidence that the Road Department is conducting maintenance—including routine, emergency, and winter maintenance—on previously completed Road segments in accordance with measurable performance standards acceptable to MCC	Met on time

Lessons Learned

The lessons summarized below are observations from the MCC team that was responsible for overseeing compact implementation.

Samtskhe-Javakheti Road Rehabilitation Activity

- **Effective contract management goes hand-in-hand with achieving desired results:** Faced with the contractor's failure to meet construction milestones, the MCG management team, with MCC's support, reduced that contractor's section incrementally while adding performance targets through an amendment to the contract. Even before taking this action, it was necessary to take extraordinary financial measures (such as converting retention to a bond to improve contractor cash flow and making direct payments to the contractor's suppliers and subcontractors) to ensure continued progress of the works. In spite of these actions, the poor performance continued, and under growing concern MCG ultimately terminated the contract in a responsible manner. This resulted in the re-bidding of those contracts to achieve completion during the final construction season of the compact. It is important to recognize and acknowledge problems early, rather than letting them linger, and to be decisive and pro-active. Also, it is important to know when and how to effectively utilize the dispute resolution mechanisms incorporated into the construction contract for timely and decisive project correction when needed.

Energy Rehabilitation Activity

- **Build local capacity to help ensure sustainability and growth**: In 2006, no Georgian companies were qualified for large scale pipeline work. The final phase of the project featured six qualified bidders, of which three were Georgian companies. Eager to gain a share of the business and the phased approach, they invested in gaining an understanding of the design standards and construction techniques applied by foreign contractors. The technical skills and expertise gained from working to international standards set a new bar for engineering achievement in Georgia and strengthened local capacity to ensure the pipeline's sustainability over the long term. Moreover, the new designs and standards reduce long-term maintenance costs. Building on this experience and extending new standards throughout the organization, GOGC applied what it had learned as the implementing entity on the MCG-funded energy rehabilitation project and went on to implement a broader investment program in the rest of the pipeline network funded by itself, other donors (including USAID), and the GoG.

Regional Infrastructure Development Activity

Parallel financing of the municipal water projects with EBRD demonstrated both the benefits and pitfalls arising from relying on another donor. There was a clear tradeoff between the benefits of financial leverage and the heightened completion risk for those parts of an integrated and inter-dependent project being funded by an institution not driven by the five-year clock.

- **Seek efficiencies and synergies in implementation**: In order to leverage compact funds, MCC and MCG financed water projects in parallel with the EBRD and entered into projects conceived by and overseen by EBRD and the World Bank. In determining how best to oversee the Regional

Infrastructure Development It was important to seek efficiencies rather than duplicating what was already in place. However, MCC retained its rights of oversight, inspection, and audit.

Georgia Regional Development Fund Activity

- **The initial high quality project due diligence done by professionals is crucial for the project's success.** Usually, market due diligence and pipeline development is a pre-requisite to investment fund creation and is done by the professional fund manager. Notably, this was not the case for the GRDF. Prior to fund formation, most private equity fund managers have identified potential investments, have established networks in the target market, and are well informed on the market prospects. The GRDF investment manager was new to the Georgian market, and so the GRDF got off to a slow start and encountered early difficulties in developing a robust pipeline of viable investments. Professional fund manager engagement prior to fund creation is therefore critical and will serve to better define expectations.
- **Clarity, visibility, and incorporating country ownership are critical to ensuring a strong public-private partnership.** Efforts were made to prevent any perceived connections between GRDF and the GoG, the sole de facto owner of the interests and the key partner of the compact. While it is understandable that the MCC position was to shield the GRDF from potential political interference, the lack of ownership by the GoG and a lack of accountability by agents entrusted to carry out the GRDF objective only served to fuel misconceptions, distrust, and animosity among the stakeholders. A perfect solution to this problem did not exist. Yet, greater involvement at the strategic level, constant dialogue, and more proactive relationship management would have helped nurture and build the sense of partnership.
- **Private equity requires flexibility and a long-term commitment beyond the MCC compact's five-year timeline.** Like GRDF, many private equity funds have a defined time limit, usually lasting from 7-10 years, consisting of an investment period followed by a wind-down period. GRDF would have benefitted, at the onset, from a clear plan and mechanism to transfer ownership at the end of the compact and ensure an orderly wind-down of the investments without pressure to liquidate. A holding structure versus a fund should be considered for similar ventures going forward.
- **Figuring out the role and appropriate size of the Technical Assistance Facility would help improve business viability and build small and medium enterprise capacity.** The Technical Assistance Facility was well received by managers and shareholders. The technical assistance provided by the Facility went towards building financial management and building needed accounting skills for participants. The implementation of enterprise risk management was also well received given their improved knowledge of their own businesses following the implementation of the project. In general, the technical assistance was seen as a significant value enhancer and improved business acumen. However, technical assistance was only applied to investees despite the option to expend on potential investees. Expanding the role and size of the Technical Assistance Facility might have improved viability of potential businesses and should be applied to both potential and accepted investment deals.

Endnotes

1. Beginning in 2009, MCC began undertaking constraints analyses based on the Hausmann, Rodrik, and Velasco diagnostic method in the preliminary analysis phase of each compact and threshold program.
2. Net benefits refer to discounted benefits minus discounted costs at a 10% discount rate
3. The activity originally targeted the rehabilitation of 245 kms of poorly maintained roads. Several scope changes ultimately reduced the target to 220 km. The SJRR Activity also included construction or rehabilitation of 27 bridges along the route.
4. BP had recently completed construction of an oil pipeline across Georgia as part of the Baku/Tbilisi/Ceyan pipeline project from Azerbaijan to Turkey.
5. The World Bank funded the Municipal Development and Decentralization First Project under which 89 investment projects in municipal infrastructure were implemented in Georgia between 1997 and 2002. From 2003 to 2007, investments and technical assistance were provided to more than 20 local self-governmental bodies within the Municipal Development and Decentralization Second Project, also funded by the World Bank.
6. Later, during the term of the compact, the MDF was designated by the GoG to serve as the preferred vehicle for implementation of all donor-funded municipal infrastructure and social investments.
7. For a description of the ADB funding for follow-on water and sanitation projects, refer, among other documents, to: Asian Development Bank; Report and Recommendation of the President to the Board of Directors; Proposed Multitranche Financing Facility: Georgia: Urban Services Improvement Investment Program; Project Number: 43405; March 2011. Asian Development Bank; Urban Services Improvement Investment Program (RRP GEO 43405): Development Coordination. This document cites Millennium Challenge Georgia's activities targeted at improving water supply and sanitation infrastructure in the major cities.
8. Net benefits refer to discounted benefits minus discounted costs at a 10% discount rate.
9. Formula for Percent Complete: (Actual-Baseline)/(Target-Baseline)*100
10. International Roughness Index (IRI): Roughness is a measure of the irregularity of the road surface. It affects the operation of a vehicle (safety, comfort, and speed of travel) and costs of operation through vehicle wear, fuel consumption and the value of human and asset time spent in transit. This affects the economic evaluation of proposed road maintenance and upgrading expenditures. The lower the number, the smoother the road.
11. Collection rate is defined as the percentage of sales by GOGC collected for all services provided in the form of cash payments, (which cash receipts may include proceeds from the sale of gas taken as payment in kind for transmission services).
12. It was possible to achieve a fee collection rate above 100% through collection of arrears in the year in which this measurement was taken.
13. Estimated number of residents of Poti, Kutaisi, Kobuleti, Borjomi, and Bakuriani, whose potable water supply increased to 18 hours per day.
14. The ERR estimate would increase to 9.2% if the model instead assumed an emergency repair cost premium of 100%, rather than 50%.
15. Source: GRDF Evaluation Report by A2F Consulting
16. Formula for Percent Complete: (Actual-Baseline)/(Target-Baseline)*100

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