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# GEORGIA AGRICULTURAL COMPETITIVENESS CASE STUDIES

CHIRINA (BIU-BIU)

25 August 2014

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# **GEORGIA AGRICULTURAL COMPETITIVENESS CASE STUDIES**

**CHIRINA (BIU-BIU)**

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## ABSTRACT

*This case study analyzes a unique greenfield investment project initiated, financed and managed a prominent member of the Georgian Russian diaspora. Having earned his personal wealth in the Russian chemical industry, Mr. Revaz Vashakidze chose to repatriate a part of his fortune to Georgia in order to invest in a modern, fully integrated poultry production plant able to compete with cheap imports of frozen meat products, which had dominated the Georgian market until 2013. Designed and built as a turnkey project by Israel's Agrotop in 2011-2013, Chirina is a unique vertically integrated complex. Its products – fresh and frozen chicken meat sold under the BiuBiu brand – already account for about a sixth of Georgia's total consumption of poultry. With the planned doubling of its processing capacity by the end of 2014, Chirina will become a major food industry player in Georgia, integrating Georgian agricultural producers into its supply base, applying downward pressure on prices, and expanding the range and quality of products available to Georgian consumers.*

# ACRONYMS

<b>CSR</b>	Corporate Social Responsibility
<b>DCFTA</b>	Deep and Comprehensive Free Trade Agreement with the European Union
<b>ENPARD</b>	European Neighborhood Program for Agriculture and Rural Development
<b>ERP</b>	Enterprise Resource Planning (system)
<b>EU</b>	European Union
<b>GSP+</b>	Generalized System of Preferences (in trade with the European Union)
<b>HACCP</b>	Hazard Analysis and Critical Control Points (a systematic preventive approach to food safety)
<b>ISO</b>	International Organization for Standardization
<b>ISO22000</b>	ISO family of international standards addressing food safety management
<b>MoESD</b>	Ministry of Economy and Sustainable Development
<b>MoJ</b>	Ministry of Justice
<b>QA</b>	Quality Assurance
<b>USAID</b>	United States Agency for International Development
<b>WEF</b>	World Economic Forum

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# I. EXECUTIVE SUMMARY

This case study analyzes a unique green field investment project initiated, financed and managed by a prominent member of the Georgian-Russian diaspora. Having earned his personal wealth in the Russian chemical industry, Mr. Revaz Vashakidze chose to repatriate a part of his fortune to Georgia to invest in a modern, fully integrated poultry production plant capable of competing with the cheap imports of frozen meat products dominating the Georgian market until 2013.

Designed and built as a turnkey project by Israel's Agrotop in 2011-2013, Chirina is a unique, vertically integrated complex that includes production of maize and wheat, drying and storage facilities, a modern feed mill, hatchery, parent stock farms, broiler farms, a meat processing plant, distribution fleet and a mobile retail network. The company's production facilities are located in Marthopi, Gamargveba, and Sartichala (a total of 172ha of land in freehold), and in immediate proximity to the Tbilisi International Airport and nearby Customs Clearance Zone. This latter area is very well served by air, road and rail transport networks.

After only a year on the market, Chirina's products – fresh and frozen chicken meat sold under the BiuBiu brand – already account for about a sixth of Georgia's total consumption. With its plans to double processing capacity by the end of 2014, Chirina will become a major food industry player in Georgia. Its operations will integrate Georgian agricultural producers into its supply base, apply downward pressure on prices, and expand the range and quality of products available to Georgian consumers.

This study carries many lessons learned with implications for Georgia's economic development. One thing Chirina's case teaches us is that Georgia, once a powerhouse of food production for the entire USSR, should at least be able to feed itself. Modern agronomic and processing technology is readily available on the global market, and Georgia has the people and the soil and climate conditions to regain the economic territory it once controlled. To achieve this and much more, Georgia should make a serious effort to re-integrate and bring home some of its best talent who left the country during many years of emigration.

In this context, **engaging the Georgian diaspora** is a first recommendation to the Georgian government from this case. Second, it is abundantly clear that Rezo Vashakidze's investment would not have happened in the business-hostile context of 1990s. **Safeguarding the business-friendly policy environment** that has been built in Georgia since 2003 is a necessary condition for Georgian diaspora investors to come back. For instance, a mechanism has to be created to swiftly review and react to complaints about inefficiencies in the tax administration or other bureaucratic hurdles. Finally, the government should **avoid using agricultural policy as a primary means of achieving social policy objectives**. Rural employment is important, but instead of trying to subsidize smallholder agriculture the Georgian government should encourage investment into large/medium size food processing businesses, which will in turn create demand for agricultural products, integrating smallholders or providing jobs for those not able to survive in agriculture.

As far as investors are concerned, Chirina's experience provides ample evidence for the benefits of **working with international production management and technology partners** to design production facilities, install modern equipment, and acquire the necessary management and technological knowhow. Another recommendation is **to avoid starting too small in scale-sensitive sectors**. In the absence of tariff and non-tariff protection measures, investors have to invest in sufficient capacity to be able to compete with larger foreign competitors. Finally, given the underdeveloped nature of Georgia's market and supporting environment, investors in food processing should find opportunities to **for vertical integration**. This means investing in agriculture and basic production capacity to ensure control and stability of raw materials. It also means investing in downstream service capacity like distribution capacity, and, if necessary, even retail channels.

## **II. APPENDICES**

- A. BACKGROUND
- B. METHODOLOGY
- C. FINDINGS
- D. RECOMMENDATIONS
- E. ADDITIONAL INFORMATION

## A. BACKGROUND

While there are no precise data, the number of Georgians who left the country since independence is estimated to be close to 1mln people. Given threats to personal security and a lack economic opportunities at home, Georgia's best talent – entrepreneurs and technical personnel, educators, doctors and scientists, musicians and artists – have left the country in pursuit of better opportunities abroad. Judging by remittance volumes, Russia is home to the largest and most powerful Georgian diaspora group, accounting for more than 50 percent in total remittance inflows. Since 2003, this group has been a major source of capital and entrepreneurial skills for Georgia's new economy.

Chirina, producer of BiuBiu poultry products, represents a unique green field investment project initiated, financed and managed by Revaz Vashakidze, a businessman rooted in the Russian chemical industry. A microbiologist by education, Revaz (Rezo) belongs to a generation of Georgians who have received their graduate and post-graduate education in Moscow and decided to stay in Russia following the dissolution of the USSR. Mr. Vashakidze happens to be a classmate and close friend of Kakha Bendukidze, libertarian guru and minister of reforms under Saakashvili's first administration. Like Bendukidze, he abandoned a successful academic career and moved into business as early as in 1991.

For more than 15 years, Rezo was in the north but his soul was in Georgia. As soon as the opportunity arose around 2007-8, he decided to repatriate and invest a part of his personal wealth in Georgia's agriculture, once the country's pride and major source of income. Mr. Vashakidze's business instincts guided him to invest in Georgia's poultry meat industry, which was practically decimated through a combination of governance crisis, corruption and mafia wars of 1990s, and, later, competition with cheap imports from the US, Turkey and elsewhere.

Chirina is a unique, vertically integrated complex, designed and built as a turnkey project by Israel's Agrotop ([www.agrotop.co.il](http://www.agrotop.co.il)) in 2011-2013. It includes production of maize and wheat, drying and storage facilities, a feed mill, hatchery, parent stock farms, broiler farms, a meat processing plant and distribution fleet and shops in the form of mobile kiosks. The company has the freehold on about 172 hectares of land in Marthopi (135 ha), Gamargveba (2 ha), and Sartichala (35 ha).

Built in accordance with state-of-the-art sanitary standards, the broiler farms are located at a distance from each other.



**Grain drying facility**



**Feedmill**



**Hatchery**



**Meat processing plant**



**Distribution fleet**

To make use of available land, Chirina planted German and Dutch varieties of apples and pears on about 50 ha in between the farms on its Marthopi property.

According to Vashakidze's estimates, until 2013, about 80 percent of poultry products were imported to Georgia, with local production accounting for no more than 20 percent<sup>1</sup>. Chirina's entry in summer 2013 increased competition in the domestic market, causing importers to slash wholesale prices from 6GEL/kg to 4.5GEL (a reduction of 25 percent).

Perhaps surprisingly, Chirina products, sold under the BiuBiu brand, did not substitute for imports of *frozen* poultry meat, which at 32,000 tons remained at roughly the same level in 2013. Instead, Chirina's main impacts were about applying downward pressure on prices, spurring a consumption increase of 20 percent, and expanding the range of *fresh* poultry products available to Georgian households. At present, Georgia's consumption of poultry meat, not counting home production, is roughly equal to the Asian average<sup>2</sup> of about 10kg/person per year, but is still considerably lower than the global average of more than 14kg/person per year. The average in the EU27 countries is about 20kg/person per year. In other words, there is room for further growth.

In operation since July 2013, Chirina currently produces more than 450 tons of poultry meat per month. This 6,000 tons per year already accounts for about 25 percent of Georgia's total consumption, but Mr. Vashakidze is not resting on laurels. New broiler farms are being built in Sartichala, with the goal of bringing production to 1,100 tons per month by the end of 2014. With their completion, Chirina will see a significant reduction in per-unit production cost due to better utilization of existing capacities, further benefiting Georgian consumers and more effectively competing with imports of lower quality frozen meat. Chirina's longer-term plan is to outsource primary production and focus on deeper processing.

## B. METHODOLOGY

This case study is based on a series of interviews with Chirina management and external stakeholders, including Revaz Vashakidze, owner and director, Keti Vashakidze (head of external relations), Keti Taktakishvili (feed production manager), Mora Paz (senior project manager, Agrotop) and Soso Okruashvili (Director, AgroMax). Business representatives shared confidential information such as medium-term business strategy, productivity, employment, international business partners and import foreign technology and knowhow, relations with local and national government.

These interviews helped identify the key issues for foreign participation in Georgia's agricultural sector as well as lessons learned and themes of broader significance for improving the national investment climate. When possible, ISET sought to identify other voices to ensure that alternative points of view were included in the report. When included, ISET clearly identified instances where stakeholders' views differ significantly or are contradictory.

## C. FINDINGS

### BUSINESS ENABLING ENVIRONMENT

Chirina is an unprecedented green field investment in the Georgian agricultural sector by a prominent representative of the Georgian-Russian diaspora community. It is unprecedented in its scale, with total investment exceeding about USD 50 million to date, as well as in the comprehensiveness of the planning and execution that have characterized the investment. Also unprecedented is the breadth and scale of knowledge transfer by an international technology partner ([www.Agrotop.co.il](http://www.Agrotop.co.il)), and,

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<sup>1</sup> These figures, of course, do not include home production by Georgia's rural household

<sup>2</sup> <http://www.thepoultrysite.com/articles/2929/global-poultry-trends-2013-asia-consumes-40-per-cent-of-worlds-chicken>

consequently, the degree of integration between all of the company's operating units, from the production of feed to retail distribution.

The general economic and political environment in Georgia in the wake of the Rose Revolution was in many ways conducive to investment, but given the nature and scale of the Chirina project it was bound to face challenges. These included a lack of skilled labor and technological knowhow, competition with uncontrolled imports of low quality frozen poultry, underdeveloped distribution and retail channels, and weak demand for high quality fresh poultry products.

The final decision to invest was made two years after the global financial crisis and Georgia's August 2008 war with Russia, in the pessimistic economic and political environment triggered by these events. In the end, Revaz Vashakidze was only able to complete the project because he had sufficient internal capital and personally engaged in strategic decisions and oversight of day-to-day operational matters. It is important to understand that Mr. Vashakidze's decision to invest his entrepreneurial talent and capital in the country's agricultural sector was only partially motivated by business considerations. To a great extent, Mr. Vashakidze's incentives had to do with a fierce desire to help his country become a better place.

### **ACCESS TO FUNDING AND AGRICULTURAL LAND**

Funding and access to agricultural land were not a bottleneck for Chirina. The company obtained the freehold on 135 hectares of land for the main production facilities in Marthopi (in the vicinity of Tbilisi Airport), 2 hectares in Gamarjveba for the meat processing factory, and 35 hectares in Sartichala for additional broiler farms. Chirina faces no legal disputes or problems with the local community related to its properties. Many of the locals from Gamarjveba and other villages in the area are employed in the company's slaughterhouse and agricultural operations.

To date, the entire investment in Chirina stands at about USD 50 million to date. Future funding needs will be modest, as Chirina's current processing capacity is sufficient to meet its projected production targets for the foreseeable future. A plan to nearly double production will only require the addition of broiler farms, which are less costly compared to other elements of the company's infrastructure.

In 2013, the company took advantage of the so-called cheap loan facility offered by the Government of Georgia (GoG) to obtain GEL 600,000 to increase the capacity of silos in Sartichala. The loan was issued by ProCredit Bank for 7 years at 13 percent, 11 percent of which are subsidized by GoG.

### **INFRASTRUCTURE**

Chirina's facilities are located in an area very well served by air, road and rail transport, in immediate proximity to the Tbilisi International Airport and the nearby Customs Clearance Zone (Gezi). The company faces no issues with access to basic infrastructure such as gas, water and electricity, though it had to invest in the "last mile" of gas and electricity transmission infrastructure. A major issue for the company, however, is the quality and stability of electricity supply. Since European equipment is sensitive to the technical quality of electricity, Chirina incurred considerable extra cost for generators and UPS units. "Even these protections, however, are not fully sufficient for our needs", says Keti Vashakidze. "Having a modern electricity supply system is crucial for us as well as for the country as a whole."

### **QUALIFIED LABOR**

#### **Ketevan Vashakidze Growing with the Company**

A graduate of the American Academy in Tbilisi and Bates College in the US, Keti came back to Georgia in 2011 to help her uncle Rezo get Chirina off the ground. At 22, with nothing but

Given Chirina's advanced technology and business processes, Georgia had little to offer as far as staff qualifications and experience. The management's strategy to mitigate this gap was to focus on potential, recruiting people who were ready to work hard and who were eager and able to learn. Prior experience or knowledge were viewed as a bonus, but not required. Israel's Agrotop was engaged not only to design and deliver the plant, but also to share knowhow and train staff in all aspects of operational management.

During the first year of operation, Agrotop had a more-or-less continuous presence of two persons on the ground to provide coaching and on-the-job training. Mora Paz, Agrotop's project manager, visited Chirina on a regular basis, twice a month. Agrotop's engineers would arrive from time to time to help with the most challenging components, like the slaughterhouse.

To continue with the training and knowledge transfer process beyond the first year, Agrotop was retained on another one-year contract. At present, training is delivered by short-term Israeli advisors, but one Israeli expert, Volodya Sukhov, has been retained by Chirina on a full-time basis to manage the parent stock farm. Chinina sent a number of key Georgian staff to Israel for more extensive training and apprenticeships with leading Israeli companies and labs.

Keti Vashakidze, Rezo's niece and the company's Quality Manager and Organizational Structure Designer, was in charge of the hiring process early on. She confirms that very few of those they hired had had prior experience or education of direct relevance for their jobs. Even when such experience was available, the staff invested considerable time and effort to acquire skills and knowledge that were specific to Chirina's technological processes. Said Keti:

"Our head of the veterinary laboratory was a professor of microbiology and had extensive lab experience. However, we needed someone with a broader profile in microbiology, virology, and serology<sup>3</sup>. The solution was to send her to Israel to spend three weeks in a reputable poultry lab. Before [she went] to Israel, we hired a private teacher to improve her English skills.

Somewhat similar is the story of Keti Taktakishvili, Chirina's feed production manager. A biologist by training, Ms. Taktakishvili came to Chirina with a few years of experience at Schaumann<sup>4</sup>, a German producer of premixes for poultry feed. While she had a good general idea of animal nutrition issues, she had no prior knowledge or experience with poultry feed recipes, related production or QA issues. Training by Agrotop experts has helped fill these gaps.

natural smarts and an economics degree from Bates, Keti started her practical education with a tour of farms and food factories around the world, including stops in Israel, Holland, Spain, Germany, and US.

The goal was to go through all the processes, observe and learn. Back home, the first order of business was to hire staff and then work with farm and factory directors to start operations. "Since the entire team was new to the business, we've been on a steep learning curve ever since", says Keti, "with a little bit of help from Mora Paz and Agrotop".

### Timing Matters

Nothing better illustrates how much timing matters than the experience of Agrotop's Mora Paz with an

<sup>3</sup> Serological tests may be performed to diagnose animals with immune deficiencies associated with the lack of antibodies in serum and other bodily fluids.

<sup>4</sup> A German company specialized in developing solutions for farm animal nutrition (<http://www.schaumann.info/>).

According to Keti, perhaps the only person with significant management experience in the poultry sector is Chirina's head of poultry production. None of the other staff in production management positions had significant experience prior to joining the company, and all have been trained by Agrotop and/or other partner companies (e.g. suppliers of production lines, machinery and inputs). All new employees routinely get trained on the job. At present, Ms. Vashakidze is heavily involved in writing up detailed manuals for all business processes, to ensure consistent quality in all aspects of Chirina's operation.

#### LAW & ORDER CONDITIONS, QUALITY OF BUREAUCRACY AND THE POLICY FRAMEWORK

Rezo Vashakidze's investment would not have happened without Georgia going through the reform process beginning with the 2003 Rose Revolution. At the most basic level, these reforms were about two things. First, they restored law and order, and, second, they were a major factor in getting corrupt government officials out of the way (see box). In line with Rezo's expectations, in the four years since Chirina's inception, he and his colleagues have not faced any issues with theft, threats to personal life or property.

Chirina's main construction phase was completed under the United National Movement (UNM) administration, which fully understood the significance of Mr. Vashakidze's investment for Georgia, according to Mora Paz. It now operates the plant under the Georgian Dream administration. Recalls Mora:

"There were no issues then and there are no issues today. For example, we had to bring in some 350-400 containers, and I was pleasantly surprised with the speed and ease of getting equipment through customs. Of course, this took a lot of work, but there were no artificial delays caused by bureaucracy and red tape. My impression is that Vashakidze did not encounter any difficulties in all his dealings with government. The fact that he invested his own money and was not dependent on either the banks or the government was of course a major factor. He did it in the easiest, most independent fashion."

Still, Chirina's management identified one problem with the current tax administration procedures. The issue is a lack of accepted standards to account for production losses. For instance, a common global practice in chicken farming is to allow for a small percentage of loss in chicken production (the figure is 5 percent specific breed raised by Chirina). In the absence of standards, the Georgian tax authorities insist on conducting physical inspections of the plant, literally counting chicken carcasses, causing inconvenience, delays and unnecessary costs.

As far as Georgia's economic policies are concerned, a challenge for Chirina's import substitution strategy in general, and its efforts to introduce to the Georgian market higher quality *fresh* meat products in particular, is Georgia's extremely liberal trade policy framework. Lax standards do little to prevent low quality frozen meat products from being imported to Georgia. Chirina was able to withstand the price competitiveness challenge with its aggressive vertical integration and investment in technology, but smaller operations would be hard pressed to compete, particularly with much larger, vertically integrated companies in Turkey and elsewhere, who often have the implicit and explicit support of government subsidies.

While it doesn't have direct implications for his business, Mr. Vashakidze allows himself a mild criticism of the current agricultural policy framework. In his view, the Georgian government is using agrarian policy to achieve social policy objectives, which is a mistake.

The current policy is to support smallholders, who are 50 percent of the population. While I understand the political significance of doing so, training and subsidizing such a large mass of subsistence farmers

earlier attempt to build a poultry plant in Gamarjveba, where Chirina's meat processing factory is located today

In 1996, Georgia was barely emerging from the post-Independence chaos of the early 1990s, presenting a business environment where basic security concerns were paramount. For about a year, Mora consulted for a group of private Georgian investors building a green-field poultry factory to serve the local market. Things started getting ugly when the project advanced and rival, government-connected racket groups targeted the project for their "protection" efforts. Mora quit when concerns about his personal security came to outweigh any professional and economic benefits. The project closed up soon afterwards.

will inevitably lead to a waste of resources. In my opinion, the emphasis should be on medium and large business, which would integrate smaller businesses and smallholders into their supply chains or provide alternative employment in processing and services. It is unfortunate that the EU and other donors are supporting such a wrong approach.

### **LOCAL SUPPLIERS AND SERVICE PROVIDERS**

Small domestic market size is an obvious issue for any company operating in Georgia. It affects not only the companies' sales but also the range and quality of local suppliers and service providers.

Thus, during the construction phase, a lot of attention had to be given to a careful selection of contractors and their training; many special tools they were lacking had to be imported from abroad; Agrotop had to invest a lot of time and effort in monitoring and quality assurance activities. As Mora Paz discovered in the process, some technical occupations were simply absent in Georgia: refrigeration engineers and technicians, qualified electricians, and tube-welders, to name just a few.

According to Mora Paz, Rezo Vashakidze was personally involved in selecting reliable contractors while Agrotop supervisors provided necessary training and monitored contractors' performance. Many special tools have been imported by Rezo or brought by Agrotop from Israel, together with other equipment and construction materials. When a tool was found missing, extra expenses had to be incurred to it fly in. In the end, the contractors had everything they needed to proceed and meet the quality targets, and the construction phase was completed with no major glitches.

Once production commenced in summer 2013, the company was able to rely on local famers to supply its feed production plant with maize and grain. According to Keti Taktakishvili, head of Chirina's feed production, the availability of industrial drying and storage facilities allows Chirina to buy large quantities at harvest time (at low cost) and accumulate stocks for 3-4 months of consumption.

As far as imports are concerned, the main issue is not prices (which are determined in the international market) but quality. For example, some items are imported and distributed by only one or two companies. There may simply be no alternative when the quality of a product is not adequate. As a result, Chirina is constantly on the lookout for alternative international suppliers, to provide better quality and choice.

Chirina has incubated a separate distribution company ("Georgian Broiler") with which it has an exclusive relationship. The company was established exactly one year ago, in summer 2013. It rents its entire fleet of refrigerated trucks from Chirina and is responsible for distribution to retailers. Because it is an independent business buying from Chirina and selling to retailers, its incentives – to sell more and grow – are aligned with those of Chirina. Both companies are interested in each other's success in increasing scale and reducing per unit costs.

### **COMPETITION AND ACCESS TO RETAIL NETWORKS**

It was Revaz Vashakidze's instinctive understanding, according to Mora, that there is a niche for fresh poultry in Georgia. Essentially the market was supplied by smaller producers of frozen chicken meat, such as Koda, and imports. The only producer of fresh poultry was Elgudja Nozadze, who supplied Goodwill and Populi. Elgudja used a reasonable technology, but operated on a relatively small scale. And because he lacked scale, he could not invest in more sophisticated feedmill equipment to produce higher quality granulated feed. The frozen market was dominated by imports, with the two largest importers (Fazenda and Sadia) specialized in Brazilian poultry (1-1.2kg broilers).

Despite its original game plan, Chirina's fresh products are not yet to be found on the shelves of major Georgian retailers. On the one hand, this is the result of limited retail capacity – and demand for – chilled (fresh) meat products, particularly, outside the capital. After all, the vast majority of Georgians are used to consuming frozen chicken, the lion's share of which is imported. On the other, it is the result of a calculated decision by Chirina to establish its brand by setting up its own retail network of mobile kiosks (slightly more than 20 at present, only covering Tbilisi), exclusively focused on fresh products.

As Keti Vashakidze explains, at the current level of production, it is actually profitable to use own retail. But once production volumes double by the end of 2014, fresh BiuBiu products are likely to finally land on the shelves of most, if not all major chains. The dearth of retailers with the capacity to sell fresh meat products, particularly outside Tbilisi, will then become binding constraint for the development of the fresh market segment.

The situation is quite different with frozen products. Chirina has established retail partnerships with five major supermarket chains (Smart, Fresco, Vegini, Nugeshi and Nikora) and is in contact with other players such as Carrefour (currently importing under its own brand from Turkey), Goodwill, and Foodmart (both companies are trying to re-emerge from near-bankruptcy).

## THE EFFECTS OF THE INVESTMENT

### IMPACT ON COMPETITION AND CONSUMERS

The company is currently producing at the pace of 6,000 tons of fresh and frozen chicken per year. The capacity of its parent stock farms<sup>5</sup> and all other elements of the production cycle (except broiler farms) would support at least double that figure. The immediate and most significant effect of Chirina's entry was increased competition in the domestic market, bringing about a decrease in the wholesale price of imported chicken from GEL 6.00 to GEL 4.50 per kilogram. Domestic consumption rose significantly, too, from 26,000 tons in 2013 to 32,000 tons in 2014. Given Chirina's plans to lower per-unit production costs and double its output by the end of 2014, the company will be able to step up its pressure on the competition while positively affecting the consumption habits of Georgian households. The company's ultimate aim is to develop the fresh market segment, where it can compete in terms of both quality and price, and then move into deeper processing, further expanding the product choice faced by Georgian consumers.

### PRODUCT AND PROCESS INNOVATION

According to Mora Paz, Agrotop's leading expert on chicken farm design, the level of integration achieved by Chirina is outstanding, as all aspects of the company's operations have been designed and implemented according to one comprehensive master plan. The company controls everything, from grain production to labs, to elevator, to feed mill, to hatchery, to the farms, the slaughterhouse and distribution. "I have designed and implemented many projects", says Mora, "but I am not familiar with anything that was as comprehensive. This is my first, and I think there aren't many parallels around the world." While the company's product is not new for Georgia, this level of complete integration is, and it is what allows Chirina to achieve very low production costs and compete effectively with imports from Turkey, Brazil, and the US.

To further enhance its capacity to compete, especially with producers in OECD markets, Chirina has started the process of ISO 22000 certification, with the goal of meeting the most rigorous food safety requirement under the HACCP framework. State-of-the-art technology and equipment are used throughout the production process.

- Chirina's dryer and storage plant – the largest in Georgia – was delivered by Britain's Chief Industries.
- The feed mill, processing grain into granulated combined feed – another first in Georgia – was built by Spain's Rosal. The feed, marketed under the brand name KvebeCo, has very low toxin content, and it is free of Salmonella. The quality of both grain and ready feed is monitored by Chirina's lab.
- The company's hatchery was built in partnership with Hatchtech of the Netherlands, a global leader in incubation equipment. Installed technology allows Chirina to automatically control the

<sup>5</sup> At present, Chirina is producing 50-60 percent more eggs than its can process. The extra eggs are sold to other producers.

temperature and humidity conditions, creating a microclimate that is ideally suited for chick embryo development.

- Highly automated breeder, pullet and broiler farms have been planned by Israel's Agrotop to ensure feed and water are delivered automatically – at the right time and in the right quantity – while ensuring minimum contact with humans (a source of diseases). Farm equipment was installed by Big Dutchman, a Dutch-American company with 75 years of experience in the poultry industry.
- Chirina's meat processing plant boasts a fully automated processing line, the first in Georgia, delivered by another Dutch partner, Meyn. The air chilling technology used in the production process ensures better drying of the meat, reducing to the minimum the amount of water in the end product.

Chirina's deployment of mobile retail points throughout Tbilisi (slightly more than 20 at the time of writing) also represents an interesting process innovation. Effectively, this tactic helped introduce to the Georgian market a new product – chilled (fresh) chicken meat – while bypassing deficiencies in the local retail infrastructure and achieving better financial results.

### **LOCAL EMPLOYMENT AND WORKFORCE DEVELOPMENT**

Chirina's total employment currently stands at 250, excluding the separate business of distribution. Given that the company is not strongly affected by seasonal factors, the vast majority of personnel is on full-time contracts. While difficult to quantify, Chirina's operations also generate considerable indirect employment through its contractors and partners, including construction companies and suppliers of grain, maize and other inputs.

To deal with the shortage of qualified personnel in a more fundamental way, Chirina started cooperating with the Agrarian University. Keti Vashakidze, who is coordinating this collaboration on behalf of Chirina, explains the company's rationale: "we wanted to identify students and recent graduates who specialized in relevant fields and who could be trained or educated with our help. Not the usual lazy guys from the villages, not people educated in the Soviet period. We wanted people to have the right skills and the right work ethic".

Chirina's knowledge transfer agreement with Agrotop has a major training component. Agrotop recruited resident instructors covering key fields of operation such parent stock, broilers, slaughterhouse, plus a number of feed specialists, a doctor/veterinarian, etc. Every two months, the whole Agrotop team arrives to give seminars for local staff that cover different aspects of the business.

Additionally, key Georgian staff members have the opportunity to visit Israel for intensive training and apprenticeships. For example, the proposed head of the slaughterhouse lab (in charge of examining the birds before they enter the meat processing facility) has very recently visited Israel for three weeks, where she worked in two government labs and returned much better equipped for her job.

Chirina also offers exemplary working conditions. Staff has access to modern amenities (showers, change rooms) and a fully-equipped dining room to make their own meals. Working in clean, safe and healthy conditions helps change people's attitude to modern agriculture and food processing, potentially motivating young Georgians to acquire relevant qualifications and enter the labor force.

### **DEVELOPMENT OF SUPPLY CHAIN AND SERVICE PROVIDERS**

The company is generating a very strong ripple effect by exercising demand for locally produced inputs and services. For example, during the construction phase, Chirina contracted a number of local companies, such as H-Rental and Heidelberg Cement. Its feed production plant is sourcing ingredients from a network of local suppliers and importers. The company's annual demand for up to 20,000 tons of maize and wheat maize and wheat is 100 percent locally supplied through a

combination Chirina-leased lands, local farmers like Sartichala-based Agromax, and smaller Georgian producers, including Indian farmers in Kakheti. Other feed ingredients are imported. This includes nutritional supplements (a major supplier is Germany-based Schaumann), soybean meal (a key source of protein in animal feed, mostly imported from Latin America), sunflower meal, soya and sunflower oil (imported from south Russia and Ukraine).

Chirina's production is expected to double by the end of 2014, triggering a round of investment in land and improved cultivation technologies by its local suppliers. Sartichala-based Agromax is an excellent case in point. Its 800ha farm is specialized in the production of maize and grain. Managed by Piet Kemp, one of the first Boer settlers in Sartichala, Agromax has a long term supply contract with Chirina, providing about 20 percent of the company's current needs.

The development of Georgia's livestock sector gradually encourages domestic processing of agricultural inputs. A good example is the Poti-based Unigrain.<sup>6</sup> Since 2005, the company has been engaged in importing and re-exporting fodder wheat, corn, sunflower, soy, barley, soybean and sunflower oil, which account for 90 percent of poultry and cattle feeding. In December 2013, Unigrain has been able to move beyond trading by opening a soya processing plant in Poti. Investment in the plant has been partially financed by a subsidized government loan of USD600,000. Unigrain's focus is specifically on livestock and poultry feed (roasted soybean, soybean meal and oil), providing companies such as Chirina with a viable local supply option.

Finally, the ripple effect originating with investment in modern agribusiness and food industry goes beyond service providers and suppliers. For instance, it is already reaching Georgia's research and education systems through demand for laboratory testing and labor with skills in veterinary medicine, plant health, soil sciences, microbiology, virology, and serology.

### **GOVERNMENT REVENUES, IMPORT SUBSTITUTION**

Having just completed a major investment phase, Chirina is yet to turn a profit, so it is not yet subject to the corporate profit tax. While specific amounts have not been disclosed by the company's management, Chirina is also paying considerable taxes on its land and properties, income tax on employee wages, and VAT on processed products.

Chirina's entire output in 2013 – 6,000 ton of fresh and frozen chicken meat – has displaced imports of frozen products. The import substitution effect from Chirina's activities is likely to at least double due to planned increase in production capacity and a reduction of per-unit cost (thanks to better capacity utilization) already by the end of 2014. An additional investment in deeper processing further down the line may help substitute for imports in new product categories.

### **LOCAL COMMUNITY DEVELOPMENT**

Chirina's operations in Gamarjeba, Matkhopi, and Sartichala have already created considerable employment for residents of these villages and

### **The Virtuous Cycle of Investment and Productivity Growth**

The symbiotic partnership between Chirina and Agromax is a great example of positive externalities translating into a virtuous circle of investment and productivity growth. The opportunity to obtain a long-term supply contract provided Sartichala-based Agromax with the incentives to invest in a new compost factory that uses Israeli technology to process Chirina's poultry manure. Financed by an agricultural loan of 600,000GEL (subsidized by the Georgian government), the factory is now producing high quality compost, which is expected to (i) generate up to 40-50 percent increase in yields per ha ; (ii) reduce reliance on chemicals, and, (iii) save up to 800,000 GEL in the cost of fertilizer. Soso Okruashvili, the company's CEO, is convinced that the cost of his investment will be recovered in one year.

Moreover, the symbiotic relationship between Chirina and Agromax does not stop there. Agromax is supplying Chirina not only with maize and wheat but also with straw to be used for bedding in broiler farms. Chirina's new broiler farms are being built in Sartichala, providing steady jobs for local households, whose livelihoods have been hurt as a result of increased industrial cultivation of surrounding pasture lands. Chirina's positive impact on local employment will thus indirectly help Sartichala-based Piet Kemp, Soso Okruashvili and Agromax in their dealings with the local community.

<sup>6</sup> <http://unigrain.all.biz/>

surrounding territories. While Chirina's own employment stands at 250 full-time staff, its overall contribution to local employment is far larger if we count jobs created downstream (in distribution and retail), on the one hand, and upstream (in agriculture production and services), on the other. According to Keti Vashakidze, in the longer run, the company would like to be more involved in the local community by investing in local schools and social infrastructure.

"For now we are employing many locals, training them, exposing them to modern production facilities, which goes totally against the image of a half-destroyed post-Soviet factory. We are also changing people's work ethic and culture, which is perhaps less tangible but not less important. These changes are hopefully being propagated through the families."

Chirina does not want to create an ecological disaster related to its business, and it is constructing a modern waste management plant eliminating any negative externalities from its production activities (particularly in Gamarjveba). Not to strain the local electricity transmission infrastructure, the company is negotiating with the government concerning improvements in the electricity supply system.

## D. GENERAL LESSONS LEARNED AND POLICY RECOMMENDATIONS

Rezo Vashakidze's investment in Chirina is truly exceptional in its ambitious design and faultless implementation. The sheer visuals of the company's modern facilities present a testimony to the fact that the country is on a path towards economic revival. It is perhaps rather symbolic that some of Chirina's facilities are located in Gamarjveba, on a spot that witnessed a much earlier attempt to build a modern poultry plant using the same technology and the help of the same Israeli consultants. That attempt failed because in 1996 Georgia lacked the basic law and order conditions for doing business and ensure investors' property rights.

It is important to note that Rezo Vashakidze chose to invest in a sector in which Georgia had excellent production capability in the Soviet days. It punctuates his point that Georgia – once a powerhouse of food production for the entire USSR – should be at least able to feed itself. While modern technology is readily available on the global market, Georgia has the people and the soil and climate conditions to regain the economic territory it has once controlled.

Finally, Georgia's economic "home run" will be difficult to accomplish without an effort to re-integrate and bring home some of the talent that left the country during many years of out-migration. Georgia should be actively courting dozens of Rezo Vashakidzes, creating the conditions for them to come back and invest their financial and human capital in Georgia's young economy. There may be many policy tools to achieve this objective, but first and foremost, the country should make this a top priority.

### RECOMMENDATIONS FOR GOVERNMENT

- **Engage the Georgian Diaspora**, in Russia and elsewhere. The Diaspora is as a goldmine of financial resources, entrepreneurial talent and skills that Georgia can potentially harness. Georgia should learn from the experience of Israel and, perhaps, also China, how to create incentives for Georgians abroad to come back and repatriate their capital.
- **Safeguard the business-friendly business environment** which has been created since 2003 Rose Revolution. At the minimum, this is about maintaining proper "law and order" conditions and respecting property rights. However, the government should also consider further measures to reduce burdens on investors, including mechanisms to swiftly review and react to complaints about inefficiencies in the tax system. While the GoG should not engage in protectionism, modern food safety measures at the border would better protect consumers and ensure local producers are on a level playing field.

- **Reduce the use of agricultural policy as a direct instrument of social policy.** With more than 50 percent of the population engaged in agriculture, and most of these subsistence farmers, it is natural for the GoG to look to agriculture policy as an obvious lever to for social welfare. There are also political benefits to supporting smallholder farmers. But using the blunt instrument of agriculture policy as a social welfare program can be expensive, create perverse incentives and fail to address the root causes of rural poverty. While some targeted subsidies and targeted agricultural programs undoubtedly make sense, the GoG should focus its policies on improving conditions for job-generating enterprises.

## RECOMMENDATIONS FOR INVESTORS

- **Work with international production management and technology partners.** Chirina was in the enviable position of having a vision and the capital to realize it, even if the knowledge and workforce wasn't yet available in Georgia. In many ways, the company brought the benefits of FDI—capital, technology, and knowhow—even though the principal investment came from a returning Georgian. They did so by engaging with international specialists to design production facilities, install modern equipment and acquire necessary management and technological knowhow. This will help avoid mistakes, or reduce their cost.
- **Don't start small in scale-sensitive sectors.** Particularly in commodity-driven industries with established competitors and tight margins, economies of scale are the only way to bring production costs down and produce enough to make an impression on the market. Investors should be well aware of the competitive forces in their industry, and they should plan to ramp up fast. This implies a sizeable upfront investment to reach sufficient scale to compete. Either don't start at all, or invest in sufficient capacity to be able to compete with larger producers in Turkey and elsewhere, who are often supported by explicit and implicit government subsidies.
- **Integrate operations to address supplier and services gaps.** While the need to control costs and the desire to manage quality are no doubt important drivers as well, the decision to invest in every step of Chirina's product value chain was also driven by a dearth of reliable quality suppliers, services and complementary businesses in the Georgian market. In more mature economies, vertical integration makes less sense, as businesses can focus on core competencies to drive down costs and forge reliable partnerships. But by investing upstream in grain production, then feed manufacturing, Chirina developed a stable, reliable, and safe supply of raw materials and inputs. By investing downstream in distribution capacity and consumer sales channels, Chirina sidestepped weak retail chains and maintained control of its emerging brand image.

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