INVEST IN GEORGIA

GEORGIAN NATIONAL INVESTMENT AGENCY

MANUFACTURING

Georgian National Investment Agency 2013

MANUFACTURING SECTOR

OVERVIEW:

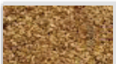
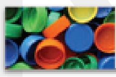
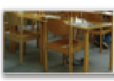
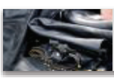
- Manufacturing and industries account for around 14% of GDP and ~ 5% of employment
- Largest industries are food and beverages (3% of total GDP) and metal products (2.5%)
- Advantage to process goods - competitive cost of power, labor and strategic location
- 2 Free Industrial Zones - In FIZ, businesses are exempted from all tax charges except Personal Income Tax

OPPORTUNITIES:

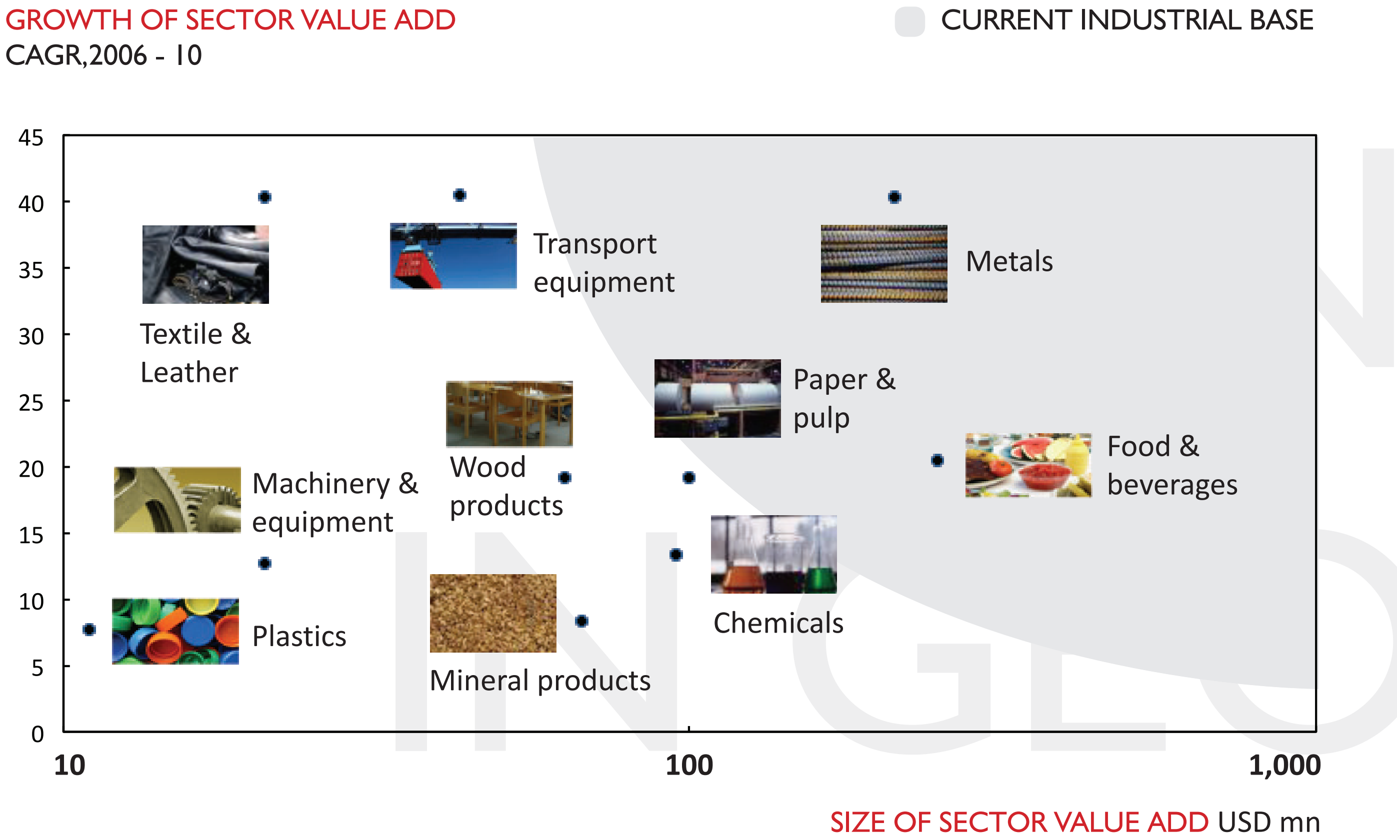
- Large import overhang in goods that are usually not traded extensively provides regional import substitution potential in food processing, construction materials, household gods etc
- Georgia’s current advantages in terms of handling large transshipment flows, business stability, low cost of power generation and existing raw materials/ intermediate products provide opportunities for large industrial bets, like production of iron and steel products, aluminum etc

MANUFACTURING SECTOR

USD milions, 2011 — Value add / Production value

INDUSTRY	PRODUCTION VALUE AND VALUE ADD (Value add / Production value)	TOP 3 PRODUCTS (VALUE ADD)	TOP 3 EXPORTS	TOP 3 COMPANIES
 Food & beverages	248 / 996	▪ Grain mill products (42) ▪ Mineral waters & soft drinks (57) ▪ Wine (29)	▪ Nuts (130) ▪ Spirituous beverages (68) ▪ Wine (54)	▪ Agara company ▪ IDS Borjomi Georgia ▪ Lomisi
 Metals	213 / 572	▪ Ferro-alloys (114) ▪ Basic precious & non-ferrous metals (63) ▪ Fabricated metal products (21)	▪ Ferro-alloys (255) ▪ Ferrous waste (117) ▪ Bars & rods (61)	▪ Georgian Manganese ▪ Quartzite ▪ GeoSteel
 Non-metallic mineral products	67 / 297	▪ Cement (18) ▪ Articles of concrete, plaster & cement (34) ▪ Glass (6)	▪ Cement (19) ▪ Articles of plaster, cement or similar materials (6) ▪ Glass (1)	▪ Heidelbergcement Georgia ▪ Georgian Cement ▪ Rkinabetonis Shpalis Karkhana
 Chemicals	95 / 260	▪ Basic chemicals (53) ▪ Pharmaceuticals (33) ▪ Soap; Cleaning & polishing preparations (6)	▪ Fertilisers (127) ▪ Medicaments (42) ▪ Soap; Cleaning & polishing preparations (8)	▪ Rustavi Azot ▪ GMP ▪ Aversi
 Transport equipment	43 / 90	▪ Railway & tramway locomotives (30) ▪ Aircraft (11) ▪ Ships (1)	▪ Parts of aircrafts (37) ▪ Parts of railway (9) ▪ Rail locomotives (7)	▪ Elmavalmshenebeli ▪ Vagonmshenebeli ▪ TAM Tbilaviamsheni
 Plastics	11 / 47	▪ Plastic products (10)	▪ Plastics (3)	▪ Caucasian PET company ▪ Alfa PET ▪ AA Plast
 Wood, paper & Furniture	63 / 170	▪ Publishing & printing (38) ▪ Furniture (10) ▪ Wood (8)	▪ Wood (22) ▪ Furniture (11) ▪ Paper (3)	▪ Embawood ▪ Star RG ▪ Kviris Palitra
 Textile & Leather	21 / 47	▪ Apparel (17) ▪ Textiles (2) ▪ Footwear (1)	▪ Apparel (26) ▪ Textiles (1) ▪ Footwear (0.2)	▪ BTM textile ▪ Demetre 96 ▪ Ajara Textile
 Machinery & equipment	21 / 43	▪ Insulated wire & cable (2) ▪ Electric motors, generators & transformers (7) ▪ Machinery for the production & use of mechanical power (5)	▪ Machine-tools (127) ▪ Compression-ignition internal combustion piston engines (42) ▪ Household washing machines (8)	▪ Saqenergoremonti ▪ Saqkabeli ▪ ICES

MANUFACTURING SECTOR

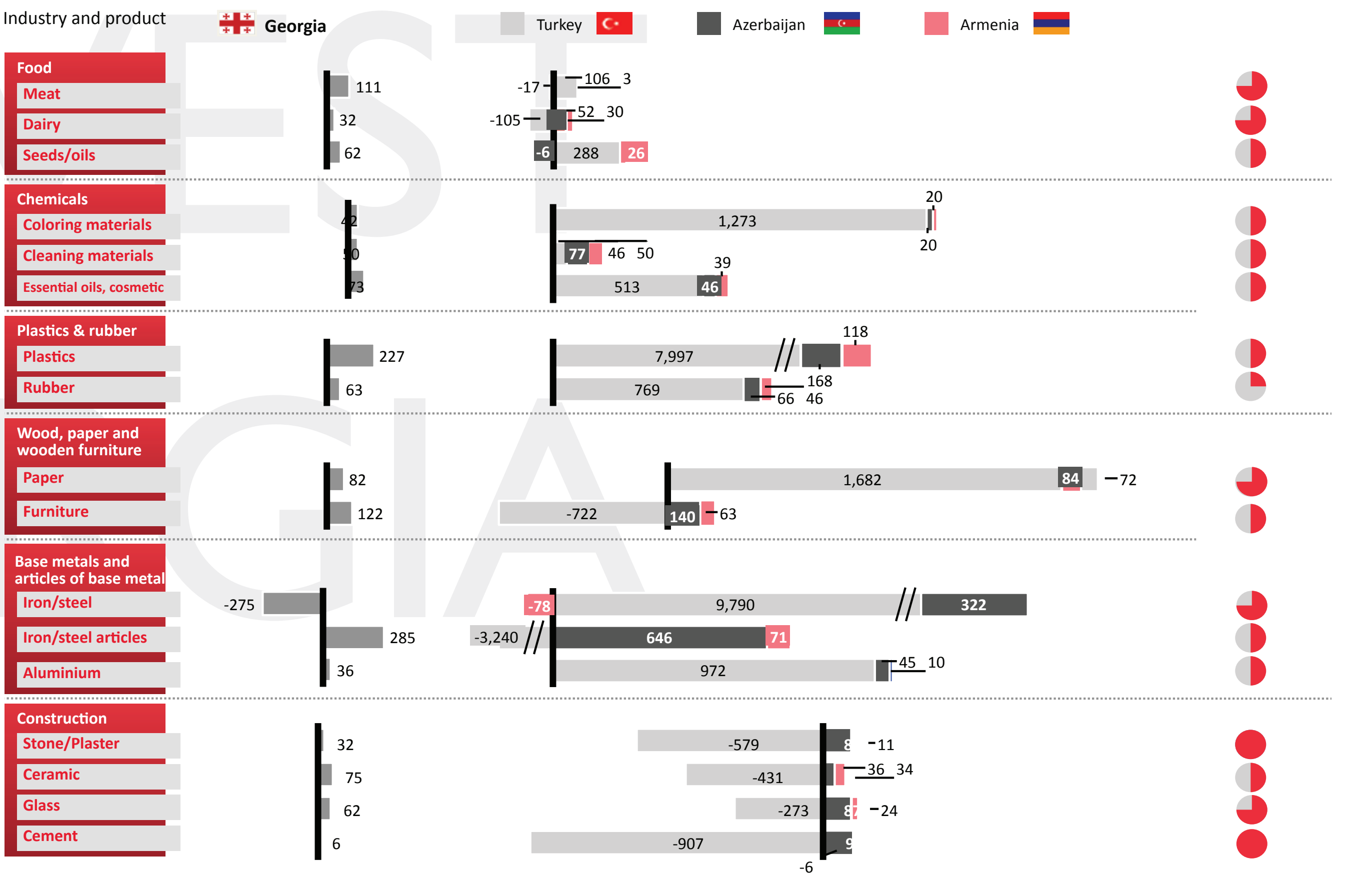


Food and metals industry provide the largest industrial base for Georgia, while textile industry, transport equipment and metals growing strongest

TRADE BALANCE IN GEORGIA AND IN THE REGION

IMPORT OVERHANG, USD mln, 2011

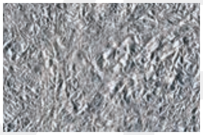
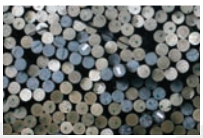
TRANSPORTATION COST



SEVERAL HIGHLY ATTRACTIVE IMPORT SUBSTITUTION OPPORTUNITIES

SECTOR	PRODUCT GROUP	PRODUCTS
Construction - Building materials	Articles of cement and steel	**Prefabs** **Ready-mix concrete** **Bricks** **Finished articles of steel**
	Articles of wood	**Plywood and laminated wood**
Construction - Finishing elements	Ceramic products	**Tiles** **Sanitary ware**
	Glass & glassware	**Windows** **Glassware**
	Furniture	**Doors** **Living furniture**
Food processing	Beverages and spirits	**Bottling**
	Preparations of fruits and vegetables	**Fruit juices** **Jams** **Vegetable oils**
	Dairy and eggs	**Milk** **Cheese** **Butter** **Yogurt**
	Meat	**Poultry/Beef/Pork/Lamb**
Packaging	Plastic packaging	
	Paper packaging	

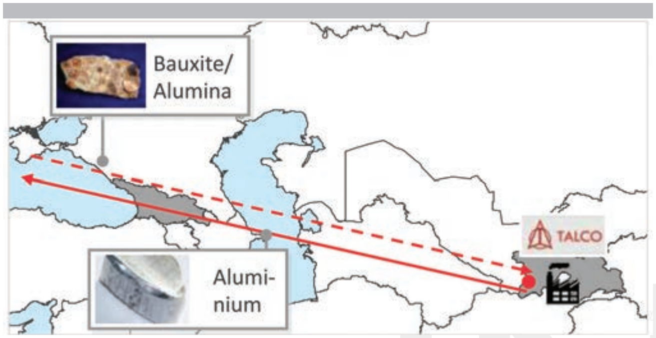
SEVERAL OPPORTUNITIES ARISING FROM GEORGIA'S TRANS-SHIPMENT FLOWS AND RESOURCES

OPPORTUNITY	CURRENT ADVANTAGES TO BE LEVERAGED	POTENTIAL FOR GEORGIA
ALUMINIUM INDUSTRY 	• Large transshipment flows of raw materials/input (Bauxite) and aluminium cross Georgia to/from Tajikistan (largest aluminium plant in Central Asia) • A lot of water recourses and large hydropower plants in the pipeline	• Value chain integration - Production of aluminium - Production of aluminium products (fabricated or end products)
IRON AND STEEL PRODUCTION 	• Georgia mines Manganese ore • Georgia produces ferro alloys, largely for export (USD ~250 mn) • Large imports of iron and steel products to Georgia (USD ~300 mn) and neighboring countries	• Vertical integration of value chain by adding production of iron and steel and related end products • Regional import substitution
COPPER 	• Georgia and Armenia export copper ores, copper waste and scrap • Import overhang of copper products (alloys and final products e.g. wire, tubes, pipes) amounts to USD ~200 mn in the region	• Production of copper alloys and end products (regional import substitution)
POLYMERS & OTHER PLASTICS 	• Import overhang of plastic products amounts to 230 mn in Georgia and 8 bln in the region • Georgia transships large flows of petroleum products	• Plastics and petrochemicals production (regional import substitution for plastics/rubber)

OPPORTUNITIES ARISING FROM GEORGIA'S TRANS-SHIPMENT FLOWS AND RESOURCES - ALUMINUM EXAMPLE

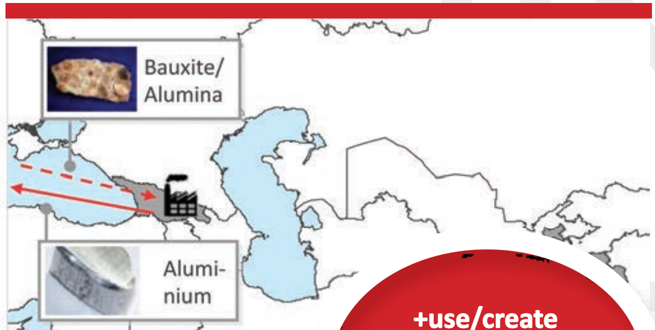
LEVERAGING TRANSSHIPMENT FLOWS, GEORGIA CAN INTEGRATE INTO A GLOBAL VALUE CHAIN OF ALUMINUM PRODUCTION.

Current value chains in aluminium production use Georgia as transit country …



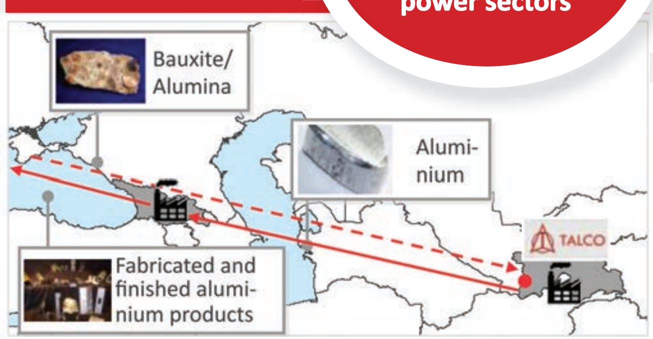
- Tajikistan Aluminium Company (TALCO) is l argest aluminium manufacturer in Central Asia
  - Total production 300-400 k tons, ~1% of global production
  - Using ~40% of Tajikistan's power generation (largely hydropower)
- No domestic bauxite/alumina, all imported (mostly from Ukraine, Azerbaijan, Kazakhstan)
- Export of raw aluminium to Europe, Turkey, CIS, China, accounting for ~40% of all exports of Tajikistan

… offering opportunity for integration upstream



+use/create complementarities with transport & power sectors

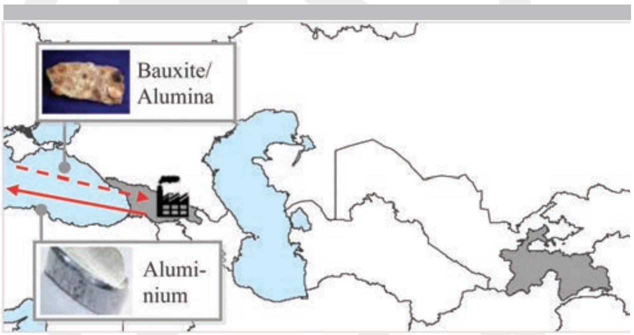
… or downstream



OPPORTUNITIES ARISING FROM GEORGIA'S TRANS-SHIPMENT FLOWS AND RESOURCES - ALUMINUM EXAMPLE

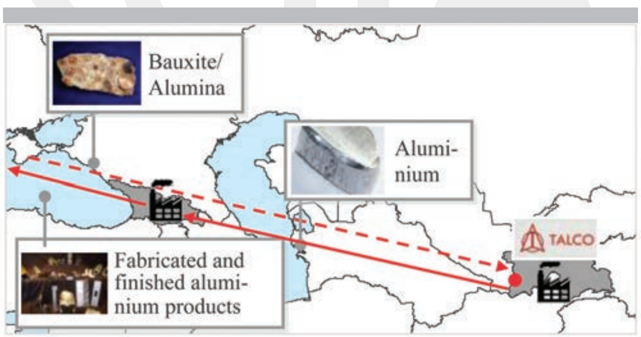
OPPORTUNITY	EVALUATION AND SIZING

Upstream integration (aluminium production)



- **Production capacity:** ~300 k tons aluminium
- **Investment size:** USD 250-500 million
- **Power consumption**: 4-5 TWh (~15,000 kWh/t), current generation in Georgia ~11 TWh
- **Market assessment**
  - Globally growing demand mainly from emerging economies
  - Current surplus capacity utilized by 2016
  - Target market with cost advantage: Europe/Turkey

Downstream integration (production of aluminium products)

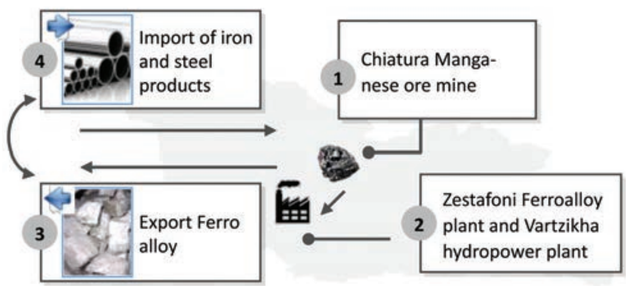


- **Production of**
  - Foundred and fabricated aluminium
  - End-user products for import substitution (e.g. construction material, packaging)
  - End-user products with complementarities to other sectors (e.g. containers for transportation)
- Production capacity and investment size depending on selected products

SEVERAL OPPORTUNITIES ARISING FROM GEORGIA'S TRANS-SHIPMENT FLOWS AND RESOURCES – EXAMPLE OF IRON AND STEEL PRODUCTION

Despite hosting some of the crucial resources, Georgia currently only integrates the first step of the iron & steel value chain ...

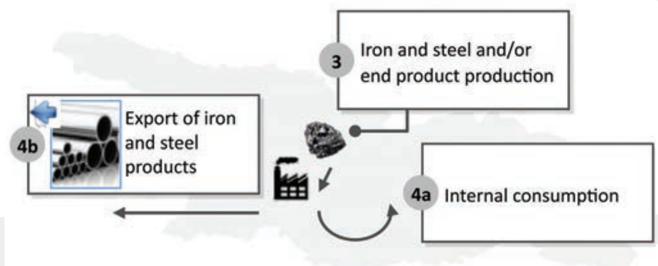
Mining → Ferro alloy production → Iron and steel production → Iron and steel end product production



Current value chain

Existing production offers opportunity for further value chain integration

Mining → Ferro alloy production → Iron and steel production → Iron and steel end product production



Vertical integration of value chain

1 **Chiatura Manganese ore mines**
- Mining 1.18 mn tons of manganese ore
- Extracting 400 k tons of concentrate

2 **Zestafoni Ferroalloy plant**
- Producing ~180 k tons of Ferrosilicomanganese (FeSiMn) and Ferromanganese (MC FeMn)
- Own power supply from Vartzikha HPP (55 MW)

3 **Export of ferro alloys, amounting to USD ~250 mn**

4 **Imports of iron and steel products to Georgia, amounting to USD ~300 mn, but also to neighboring countries**

3 Production of iron and steel and related end products

4a Internal consumption/ regional import substitution

4b Export of iron & steel products

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