



Regional Value Chains in East Africa: What Can We Learn from the Latin American and Asian Experiences?



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Kampala, Uganda

AGENDA

1. Overview of GVC Framework

- **Holistic View of Global Industries**
- **Strategic Benchmarking through International Comparisons**
- **Moving Up the Value Chain – From Commodities to High Value Activities**

2. Medical Devices GVC in Costa Rica

3. Upgrading in the Coffee GVC: Burundi and Central America

4. GVCs and Regional Value Chains in East Africa

- **GVC Participation: Forward and Backward Linkages (Integration)**
- **Wheat and Maize GVCs: Black Sea Region and East Africa**
- **Tourism and Dairy**
- **Policy Issues and Opportunities/Challenges for Upgrading**

Global Value Chains and Competitiveness

DUKE UNIVERSITY, CENTER ON GLOBALIZATION, GOVERNANCE & COMPETITIVENESS (DUKE CGGC)

Duke CENTER on GLOBALIZATION, GOVERNANCE & COMPETITIVENESS
at the Social Science Research Institute

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dedicated to **INNOVATIVE and INTERDISCIPLINARY** research

- 1 Global Value Chains & Development
- 2 Environment
- 3 Agriculture, Food & Health
- 4 NC in the Global Economy
- 5 Global Engineering & Entrepreneurship
- 6 Nanotechnology



SKILLS FOR PRIVATE SECTOR DEVELOPMENT

Project Overview

Burundi in the Agribusiness, Coffee and Energy Global Value Chains



INCLUSION OF SMALL- AND MEDIUM-SIZED PRODUCERS IN HIGH-VALUE AGRO-FOOD VALUE CHAINS



Penny Bamber
Andrew Guinn
Gary Gereffi

Dul

Karina Fernandez-Stark, Penny Bamber & Gary Gereffi
May 2012

This paper uses the global value chain methodology to analyze Inter-American Development Bank Multilateral Investment Fund (IDB-MIF) initiatives in Latin America that aim to include high-value agriculture small producers in the national, regional and global chains. Based on extensive primary and secondary research, we propose a holistic model for these interventions. The model is based on the common operations that producers face to compete in national and international markets: access to markets, access to training, coordination and collaboration building and access to finance. We present key lessons learned from the interventions carried out by the IDB-MIF in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru. In addition, we highlight three best practices from interventions followed by other development agencies. We find that a market approach which considers these producers as productive agents is essential to success, the group "small- and medium-sized producers". Heterogeneous and producers have different levels of development that require different support's holistic interventions to overcome major constraints tend to be more successful than those that assume companies are one or a few, an exit strategy must be incorporated from the beginning of project design to ensure sustainability and implementation should be carried out by a national actor with local experience and expertise that can leverage synergies with other agencies to maximize on scarce resources and ensure all necessary equipment and infrastructure are available for the intervention's long term success.

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Multilateral Investment Fund
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RESEARCH REPORTS

Targeting Inclusive Development: A Value Chain Approach to Sewer Infrastructure Investment

The purpose of this report is to investigate how six local governments investing in water infrastructure have successfully incorporated targeted businesses



HIGHLIGHTS

Global Value Chain Analysis:
A PRIMER

View Report

GVC's & Inclusive Development

Source: <http://cggc.duke.edu/>

The New Global Economy: Trends and Implications

- Trends
 - **GVCs** as 80% of world trade (UNCTAD, WIR 2013)
 - **Geographic concentration** of production and consumption in large emerging economies
 - **Consolidation** within GVCs in fewer, larger suppliers
 - More South-South trade = **shifting end markets**
- Implications
 - **More opportunities** for connection and upgrading in large emerging economies
 - **Challenges** for small countries and firms on the periphery
 - Economic upgrading **≠** Social upgrading

GLOBAL VALUE CHAINS: A HOLISTIC APPROACH

Global value chain analysis provides both conceptual and methodological tools for examining the global economy

- **Top-down**: a focus on lead firms and inter-firm networks, using varied typologies of **value chain “governance”**
- **Bottom-up**: a focus on countries and regions, which are analyzed in terms of diverse trajectories of **economic and social “upgrading”**

DIMENSIONS OF GLOBAL VALUE CHAIN ANALYSIS

1. Value Chain Mapping
(Input-Output Structure)

2. Geographic Scope

3. Governance Structure: Lead
Firms & Industry Organization

4. Local Institutional Context

5. Industry Stakeholders

6. Upgrading

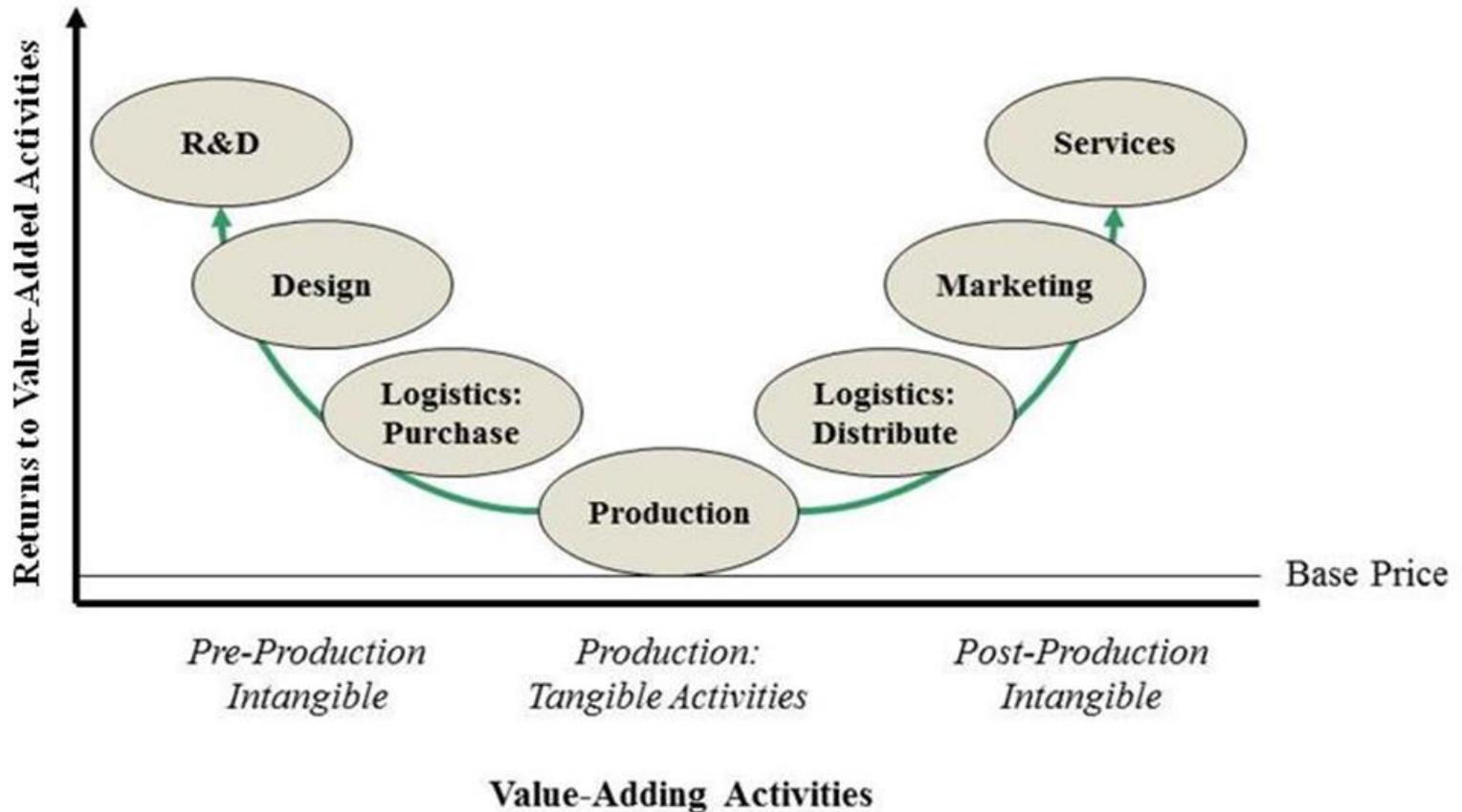


GLOBAL



LOCAL

Where Are the High-Value Activities in GVCs?



Drivers of GVC Competitiveness

- 1. Role of the state**
- 2. Types of FDI**
- 3. Public-private collaboration**
- 4. International benchmarking**
- 5. Regional value chains**

Duke CGGC project with IGC: Regional Value Chains in East Africa

- Study supported by the International Growth Centre (IGC)
- Three value chains
 - Maize
 - Dairy
 - Tourism
- **Goal:** Understand the structure of regional value chains (RVCs) in selected industries and identify opportunities to upgrade firm capabilities

Issues in Value Chain Analysis for East Africa

- How are supply and demand linked, and how does information flow between actors in these areas?
- How is the production of goods and services embedded within networks of firms?
 - e.g., regional tourism products
- Where are opportunities to add more value through intra-regional specialization and coordination?

COSTA RICA IN THE MEDICAL DEVICES GLOBAL VALUE CHAIN

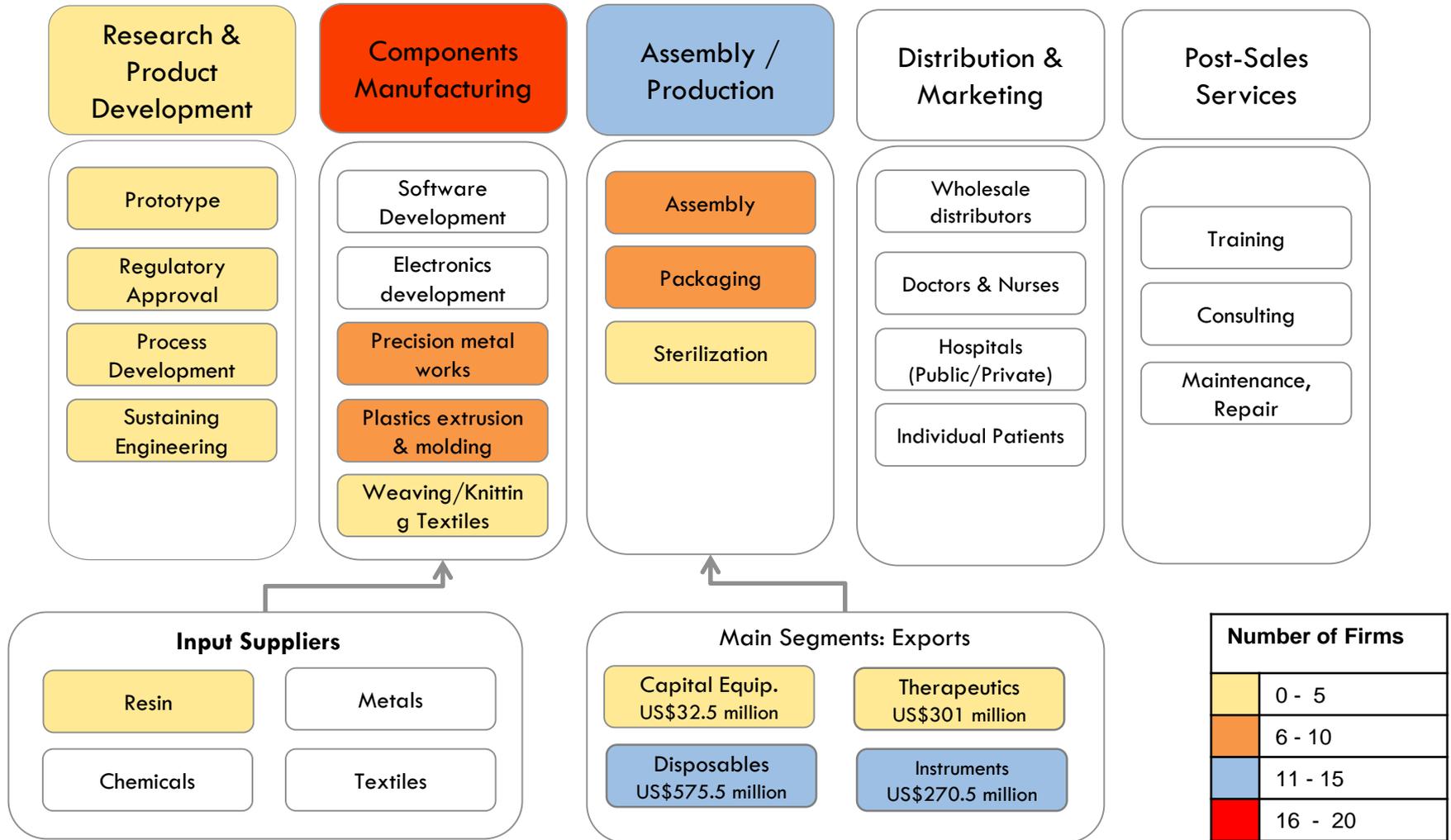
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GVCs in Costa Rica

- Study for Costa Rica's Ministry of International Trade (2013)
(<http://www.cggc.duke.edu/gvc/project.php?proj=180>)
- 3 Manufacturing GVCs: Economic Diversification
 - Medical devices
 - Electronics
 - Aerospace
- **Research questions:** How well positioned is Costa Rica to upgrade in these GVCs, and what factors contribute to positive or negative outcomes?

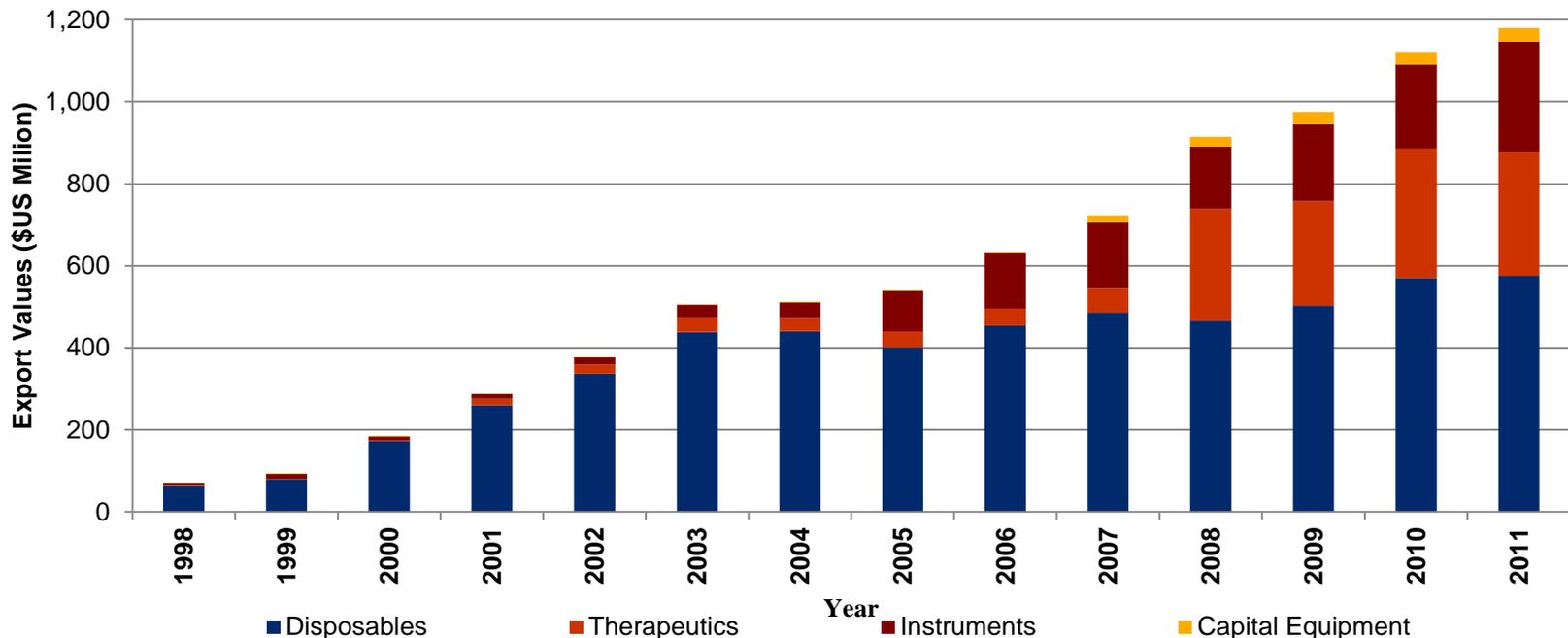
COSTA RICA IN THE MEDICAL DEVICES GVC



Local firms are mainly in packaging & support services (12 of 19) versus 4 in limited role in plastics molding & metal finishing and 1 OEM with exports under \$2 million.

EVOLUTION OF COSTA RICAN MEDICAL DEVICE EXPORTS

Costa Rica's Medical Exports by Product Category: 1998-2011

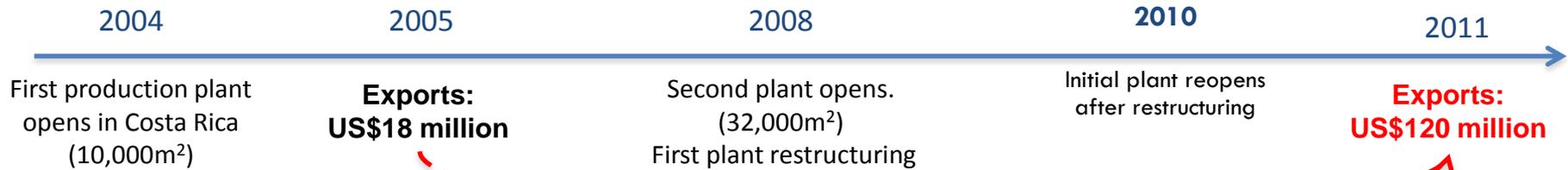


- **Disposables** still the largest product category exported, but no longer a strong growth area.
- Exports in **surgical instruments** have grown steadily since 2005.
- **Therapeutics** has become 2nd largest category since 2008; likely to increase as newly established firms complete transfer of new product lines.
- Limited export of highest value **capital equipment** (eg. Electronic/software devices)

FIRMS IN COSTA RICA MEDICAL DEVICES SECTOR

Entry Year	Firm Characteristics	Main Product Export Category	Core Market Segments	Product Examples	Select Firms
Up to 2000 24 firms: 8 US 15 CR 1 German	4 OEMs 8 Components 1 Input distributor 7 Packaging 1 Finishing 3 Support services	Disposables	Drug delivery; Women's health	Intravenous tubing (I) Mastectomy bra (I)	Hospira; Baxter; Amoena; Corbel
2001–2004 13 firms: 9 US 3 CR 1 Colombian	3 OEMS 6 Components 1 Finishing 1 Logistics provider 2 Support services	Instruments	Endoscopic surgery	Biopsy forceps (II)	Arthrocare; Boston Scientific; Ober Industries
2005–2008 8 firms: 7 US 1 Puerto Rico	2 OEM 4 Components 1 Packaging 1 Finishing	Therapeutics	Cosmetic surgery; Women's health & urology	Breast implants (III) Minimally invasive devices for uterine surgery (II)	Allergan; Tegra Medical; Specialty Coating Systems
2009–2012 21 firms: 16 US 1 CR 1 Ireland 1 Japan 2 Joint ventures (US-CR)	5 OEMS 7 Components 2 Non-OEM assemblers 1 Input Distributor 2 Sterilization 2 Packaging	Therapeutics Disposables Instruments	Cardiovascular Drug delivery	Heart valves (III) Dialysis catheters (III) Guide wires (III) Compression socks (I)	Abbott Vascular St. Jude Medical Covidien Moog Synergy Health Volcano Corp.

UPGRADING SUCCESS: A LEADING MEDICAL DEVICES MNC IN COSTA RICA



Functional Upgrading

- 2004: Manufacturing functions
- 2012: Engineering for process improvements → Focused on cardiology segment; strategy – to alleviate R&D costs in the US.

Product & Process Upgrading

- Biopsy forceps → Labor intensive, basic metal works & extrusion.
- Urethral stent → Thermoforming, laser marking, coating capabilities.
- Guide Wires → Sophisticated Laser cutting & welding.
- Today – CR facilities cover 42 manufacturing processes.

Market Diversification

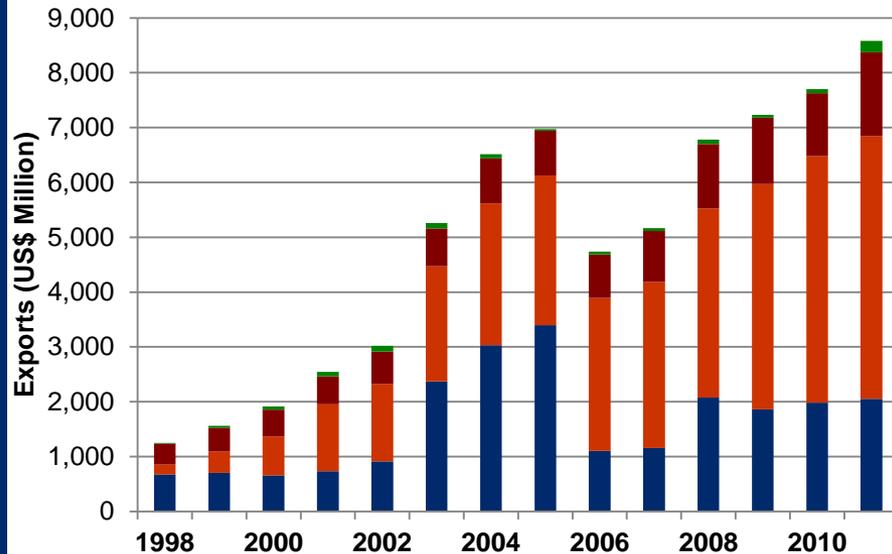
- Gastroenterology segment → Urology → Cardiovascular

Forward Linkages

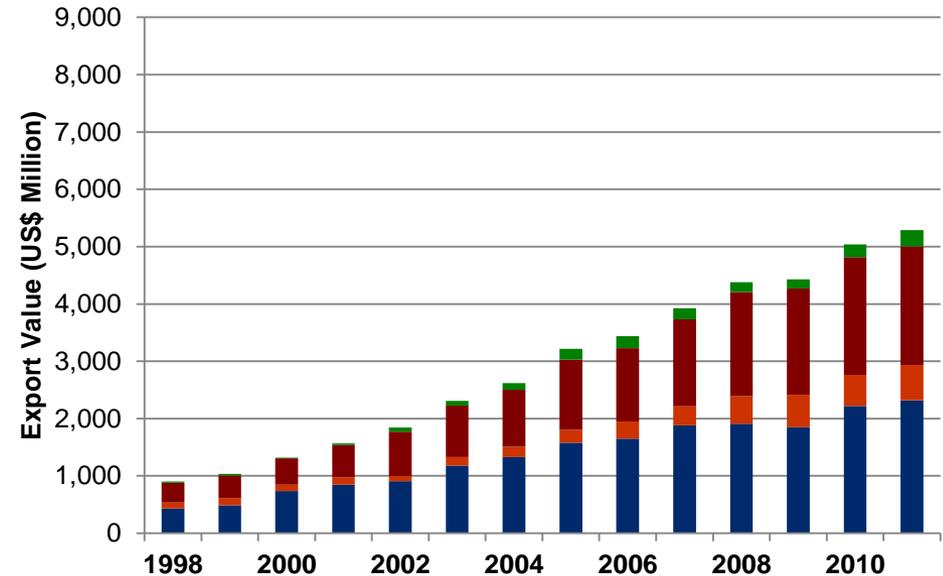
- Recent co-location of sterilization vendors will allow the firm to export directly to global distribution centers

IRELAND AND MEXICO: MEDICAL DEVICE EXPORTS 1998-2011

IRELAND



MEXICO



- Most mature of the three locations
- 2005 shock forced upgrading strategy
- Significant growth in **therapeutics** & entry into **capital equipment** production

- Stabilizing **disposables** exports
- Strong focus in **instruments**
- Growing gains in **capital equipment** → participation in electronics value chains

FROM COMMODITIES TO SPECIALTY NICHES IN THE COFFEE GVC

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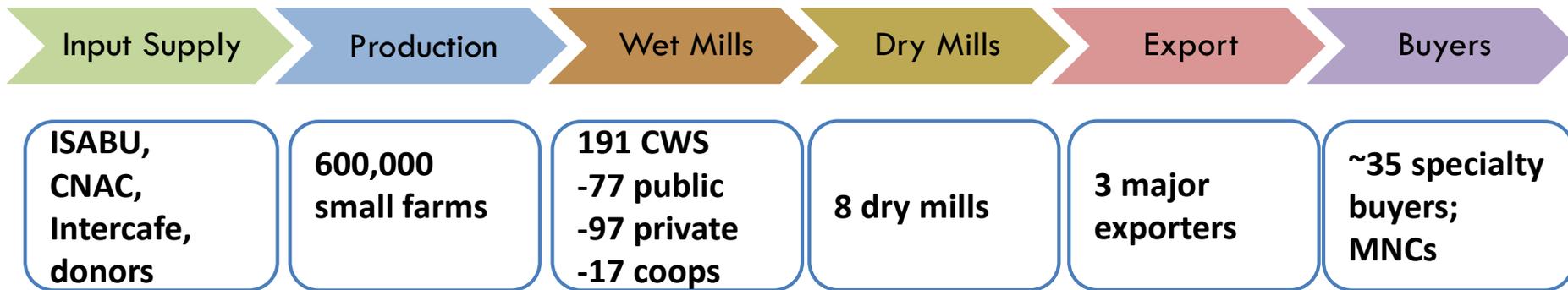
Upgrading in Coffee GVCs

- Entering the GVC
 - Minimum capabilities and market linkages
- The nature of the product
 - Robusta vs. Arabica coffee
- Differentiated certifications
 - Organic, Fair Trade, Rainforest Alliance, UTZ
- Quality standards
 - Specialty Coffee Associations in end-markets
- Marketing networks
 - Relationships with foreign buyers and understanding your consumer preferences

GVCs and Skills in Burundi

- Study for World Bank Education Secretariat (http://www.cggc.duke.edu/pdfs/2014_02_28_Duke_CG_GC_Final_Project_Summary.pdf)
- Three strategic chains
 - Coffee
 - Agribusiness
 - Electrical energy
- **GOAL:** Use GVC framework to analyze potential upgrading trajectories for the Burundian coffee sector and identify corresponding workforce development needs

Burundi Coffee Value Chain at a Glance

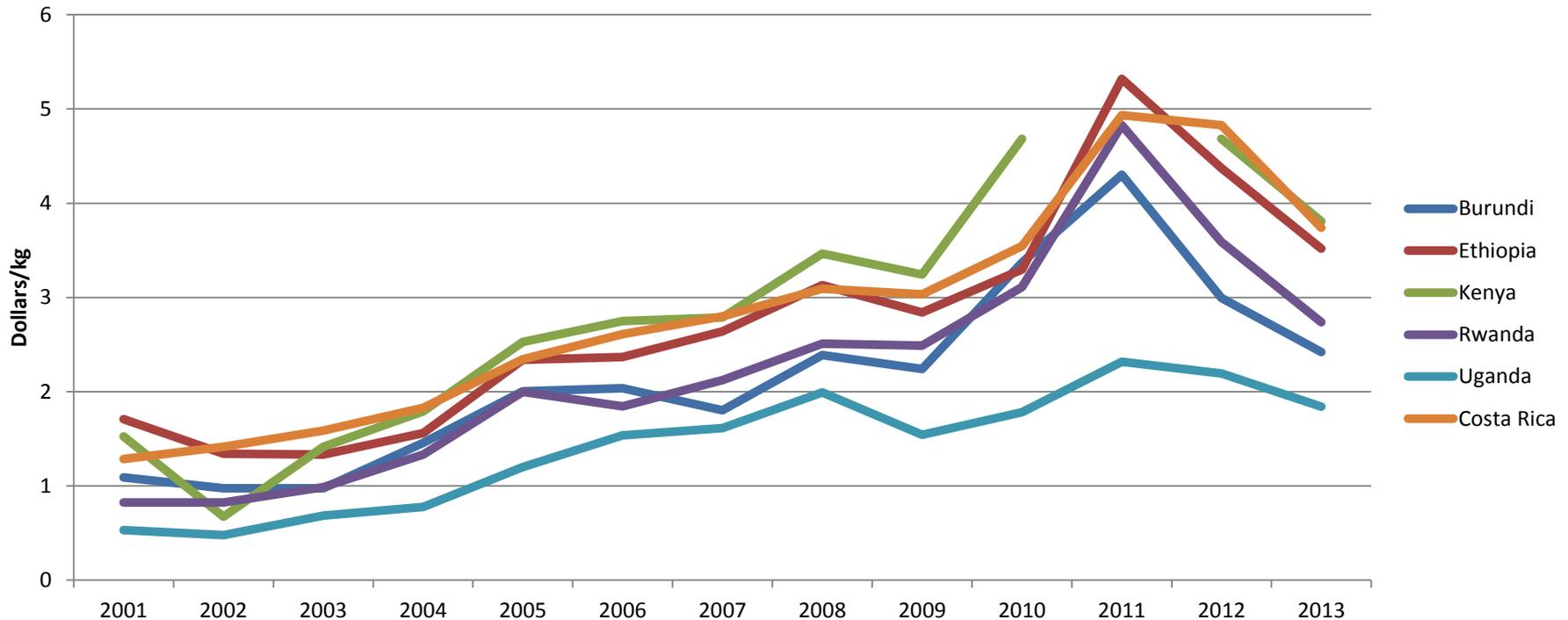


Barriers to upgrading

- **Poor quality inputs (fertilizer, mulch, seedlings, extension services) threaten product quality and consistency**
- **Lack of knowledge among farmers and washing stations regarding best practices**
- **Farmers and washing stations lack direct access to buyers of specialty coffee, who have information about end-market demand**

Regional and international comparisons

Export unit values



- **Burundi has underperformed with respect to other Arabica producers.**
- **Ugandan production is concentrated in Robusta varieties.**
- **Costa Rican policy has emphasized quality, consistency and social upgrading through regulation and stakeholder coordination.**

EAST AFRICA IN GLOBAL AND REGIONAL VALUE CHAINS

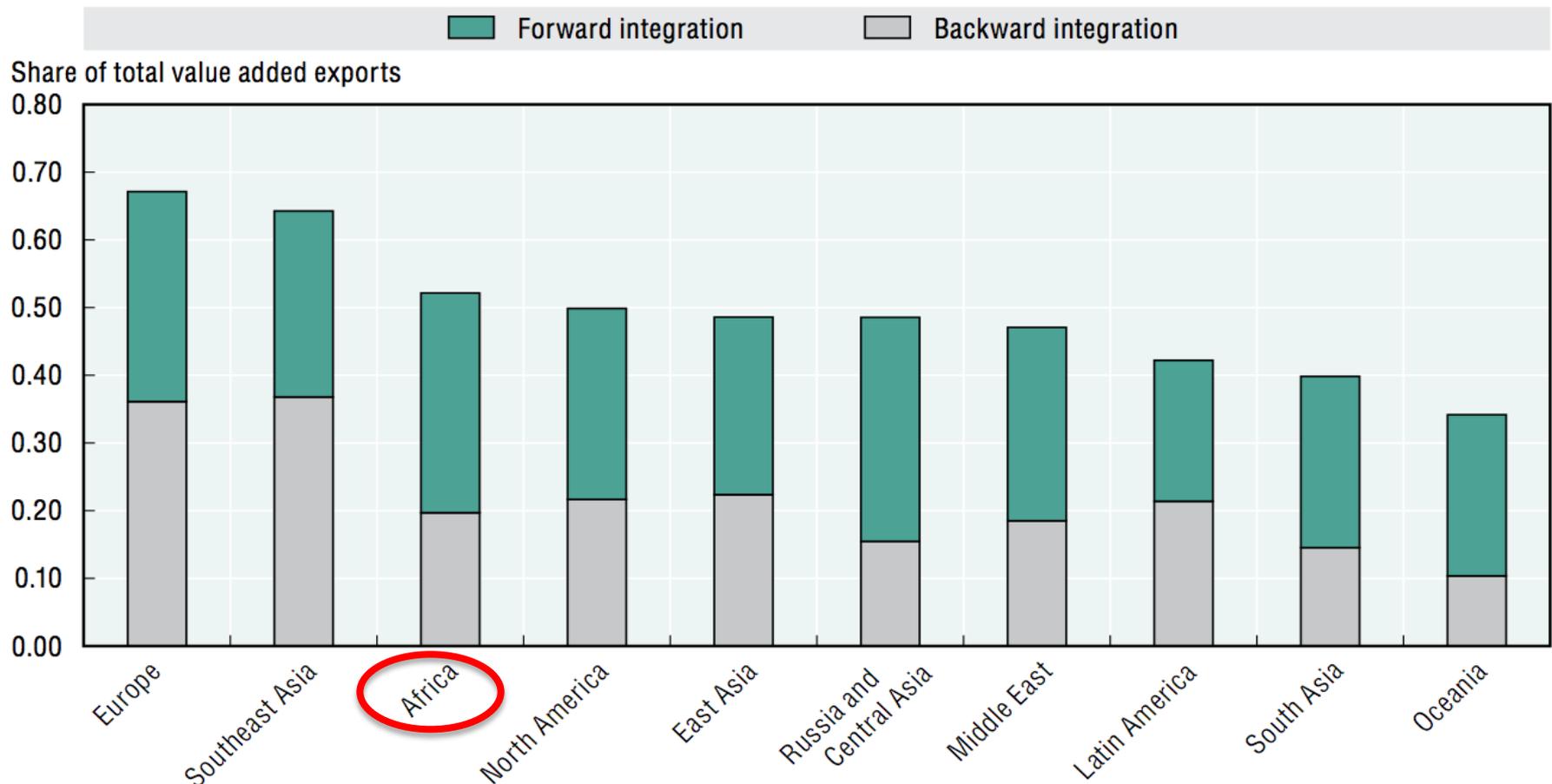
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Africa's Participation in GVCs in International Perspective

- Africa captures a **small share (2.2%) of global GVC trade**
- ...but GVC trade is **growing faster in Africa than in any other major region** (80% growth 1995-2011)
- In spite of a low share of global GVC trade, **participation is high compared to other regions**
- ...and participation is **shifting from forward to backward integration** in GVCs (i.e., more local value added)
- **South Africa** is playing a leading role in coordinating GVC exports from Africa

Integration of Global Regions into GVCs



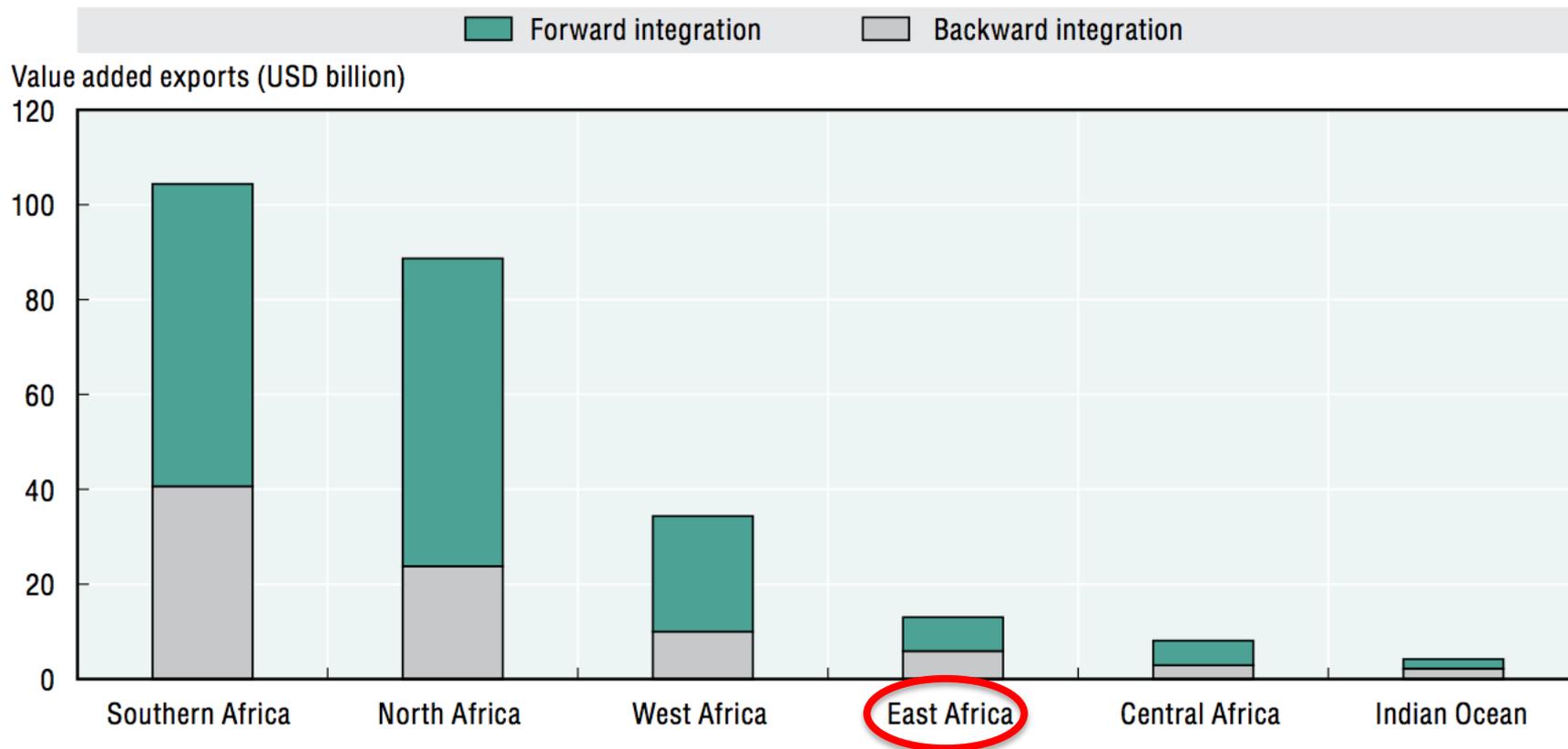
Note: **Forward integration** is measured by the share of a country's exported value added that is further exported by the importing country. **Backward integration** is measured by the share of foreign value added embedded in a country's exports.

Source: AfDB/OECD/UNDP (2014) African Economic Outlook, based on UNCTAD EORA database

East Africa in GVCs

- East Africa is relatively **less integrated in global-scale GVCs than other regions of Africa**
- **EAC and COMESA** agreements are enabling greater **vertical specialization** in value chain niches, promoting efficiencies
 - **Intra-African and intra-regional value added** is more prevalent than in East Africa than other African sub-regions, indicating **high participation in RVCs**
- GVC participation in East Africa is **driven by primary sectors**, rather than manufacturing and services

Integration of African Regions into GVCs



Note: **Forward integration** is measured by the share of a country's exported value added that is further exported by the importing country. **Backward integration** is measured by the share of foreign value added embedded in a country's exports.

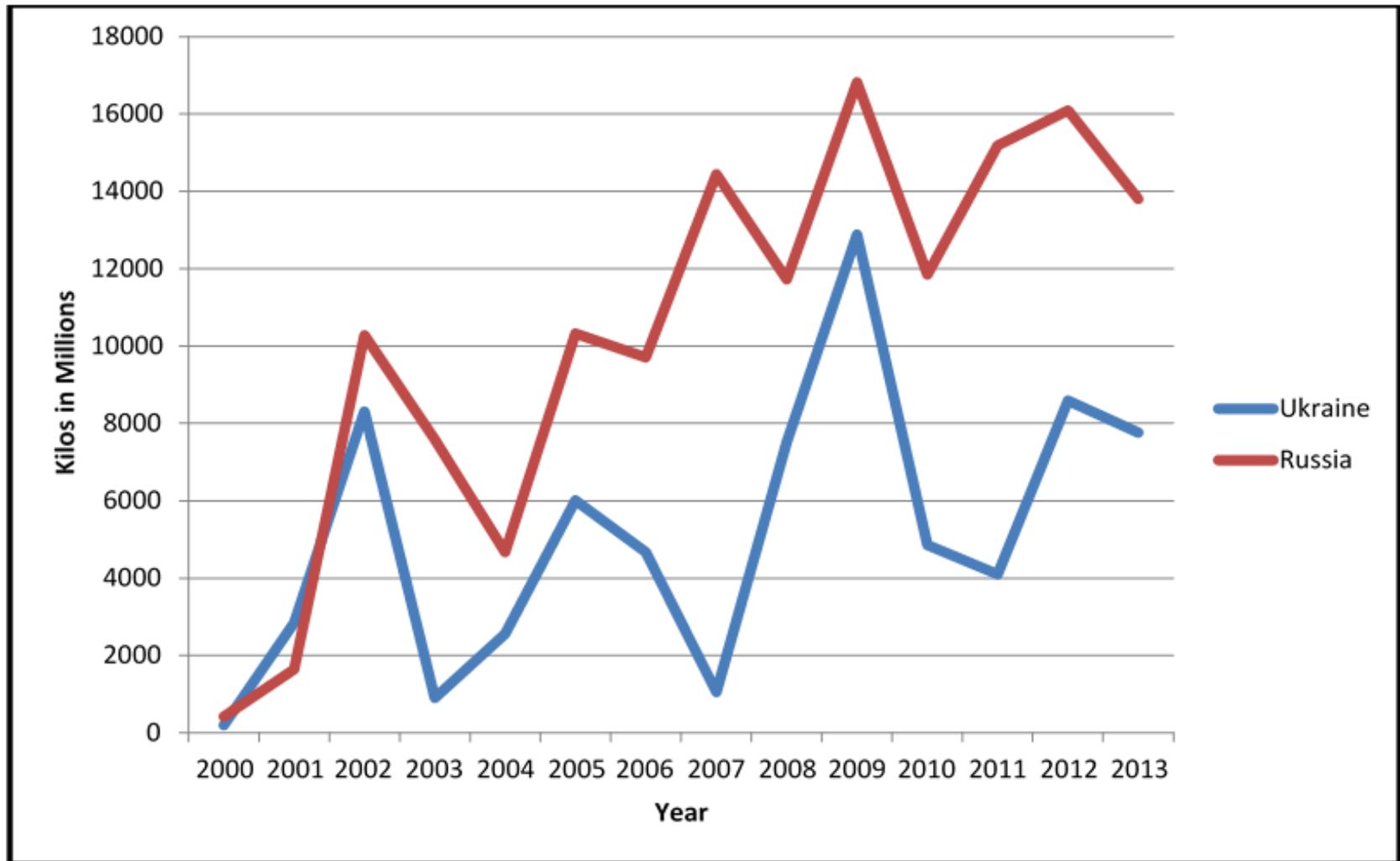
Source: AfDB/OECD/UNDP (2014) African Economic Outlook, based on UNCTAD EORA database

**THE WHEAT AND MAIZE GVCS:
CONSTRAINTS AND OPPORTUNITIES IN RUSSIA
AND UKRAINE VERSUS EAST AFRICA**

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The Black Sea's Global Wheat Exports, 2000-2013



Comparative benchmarking

Russia and Ukraine: Key statistics

Country	Russia	Ukraine
Population	143.5 million	45.5 million
GDP	\$2.097 trillion	\$177.4 billion
Top 3 Agriculture Exports	Wheat, Sunflower oil, Tobacco	Wheat, Corn, Sunflower oil
2013 Exported Wheat in Tonnes	18.5 million	9.5 million
Lead Wheat Firms	OOO Trading House RIF, United Grain Company, Louis Dreyfus, Glencore	Khlib Investbud, Nibulon, Kernel & Louis Dreyfus

Comparative benchmarking: export markets

Russia's top 4 export markets: 2000-2013

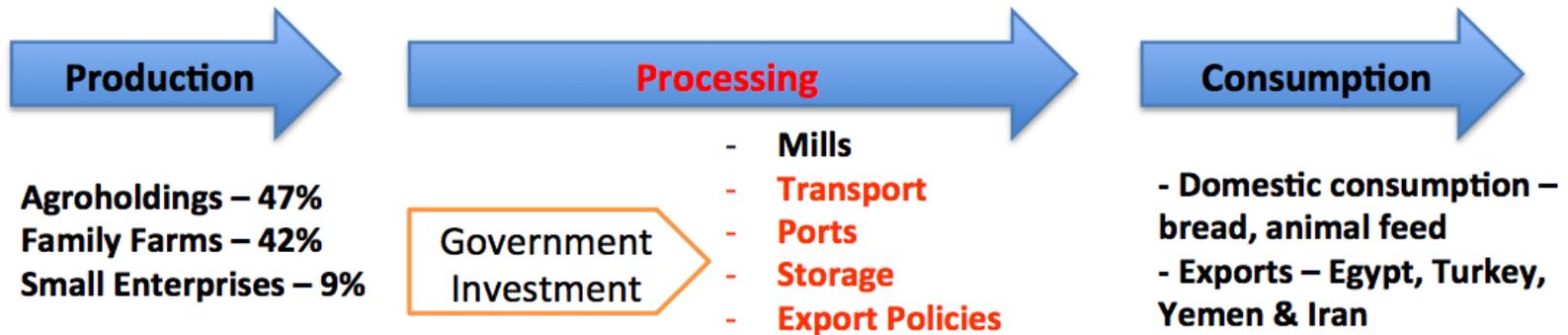
2000		2003		2006		2009		2012		2013	
Azerbaijan	54%	Ukraine	14%	Egypt	23%	Egypt	29%	Egypt	33%	Turkey	18%
Israel	29%	Egypt	10%	India	18%	Turkey	13%	Turkey	17%	Egypt	16%
Georgia	7%	Israel	7%	Bangladesh	11%	Syria	8%	Iran	6%	Yemen	6%
Ukraine	5%	Italy	7%	Azerbaijan	7%	Libya	4%	Yemen	5%	Iran	5%

Ukraine's top 4 export markets: 2000-2013

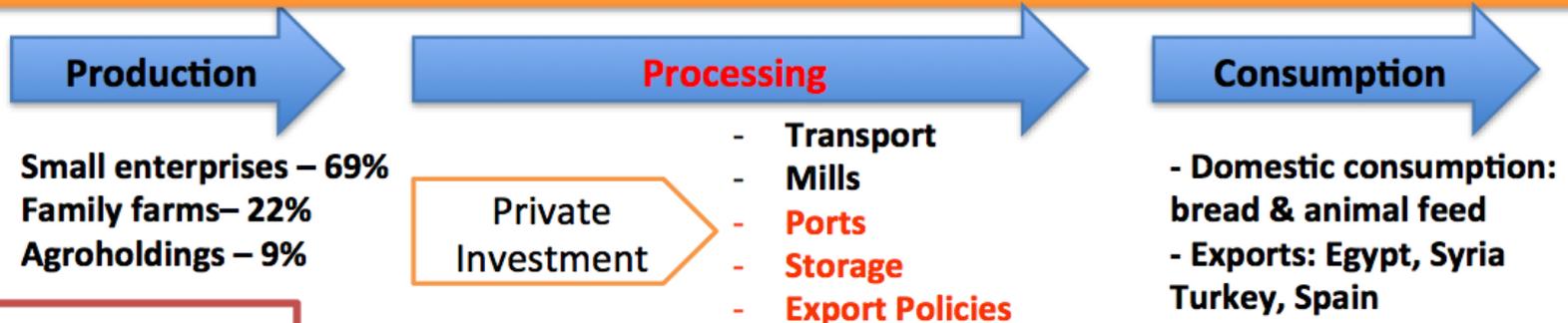
2000		2003		2006		2009		2012		2013	
Belarus	21%	Indonesia	17%	Egypt	10%	Bangladesh	18%	Egypt	29%	Egypt	25%
Israel	19%	Israel	17%	Israel	10%	Spain	14%	Spain	14%	Syria	8%
Netherlands	13%	Spain	11%	Bangladesh	9%	Rep. of Korea	14%	Israel	9%	South Africa	7%
Armenia	9%	Hungary	7%	Italy	8%	Philippines	8%	Morocco	8%	Kenya	6%

Identifying Disruption Points in the GVC

2014 Russian Wheat Value Chain Vulnerabilities

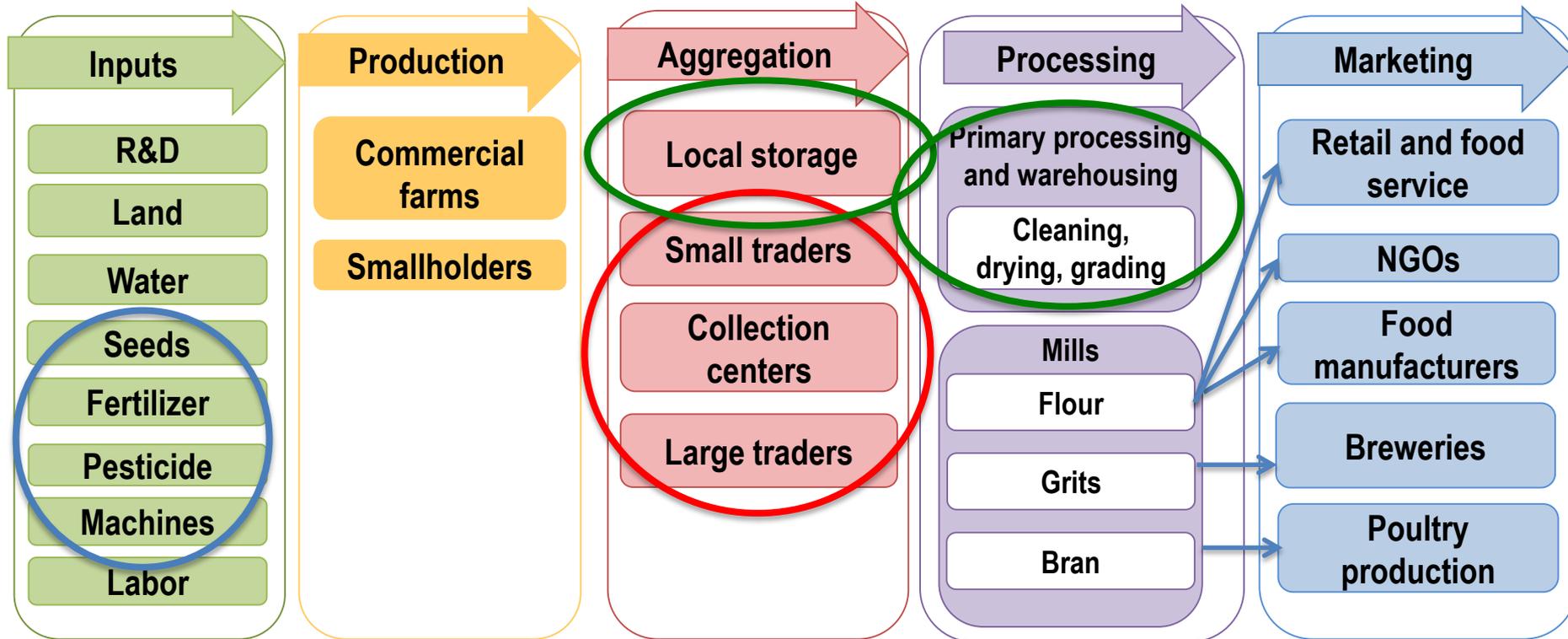


2014 Ukraine Wheat Value Chain Vulnerabilities



Red: Disruption points

The Maize Value Chain in East Africa



Some key issues

- **Informal domestic and regional trade.**
- **Storage as a bottleneck: undermines quality and generates waste.**
- **Access to high-quality inputs.**
- **Role of the state in sector coordination and enforcement of standards.**

THE TOURISM VALUE CHAIN: VALUE ADDITION THROUGH LOCAL LINKAGES

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Circulation of Money in Tourism Value Chain



COLOR KEY

- OUTSIDE DESTINATION
- INSIDE AND OUTSIDE DESTINATION
- INSIDE DESTINATION

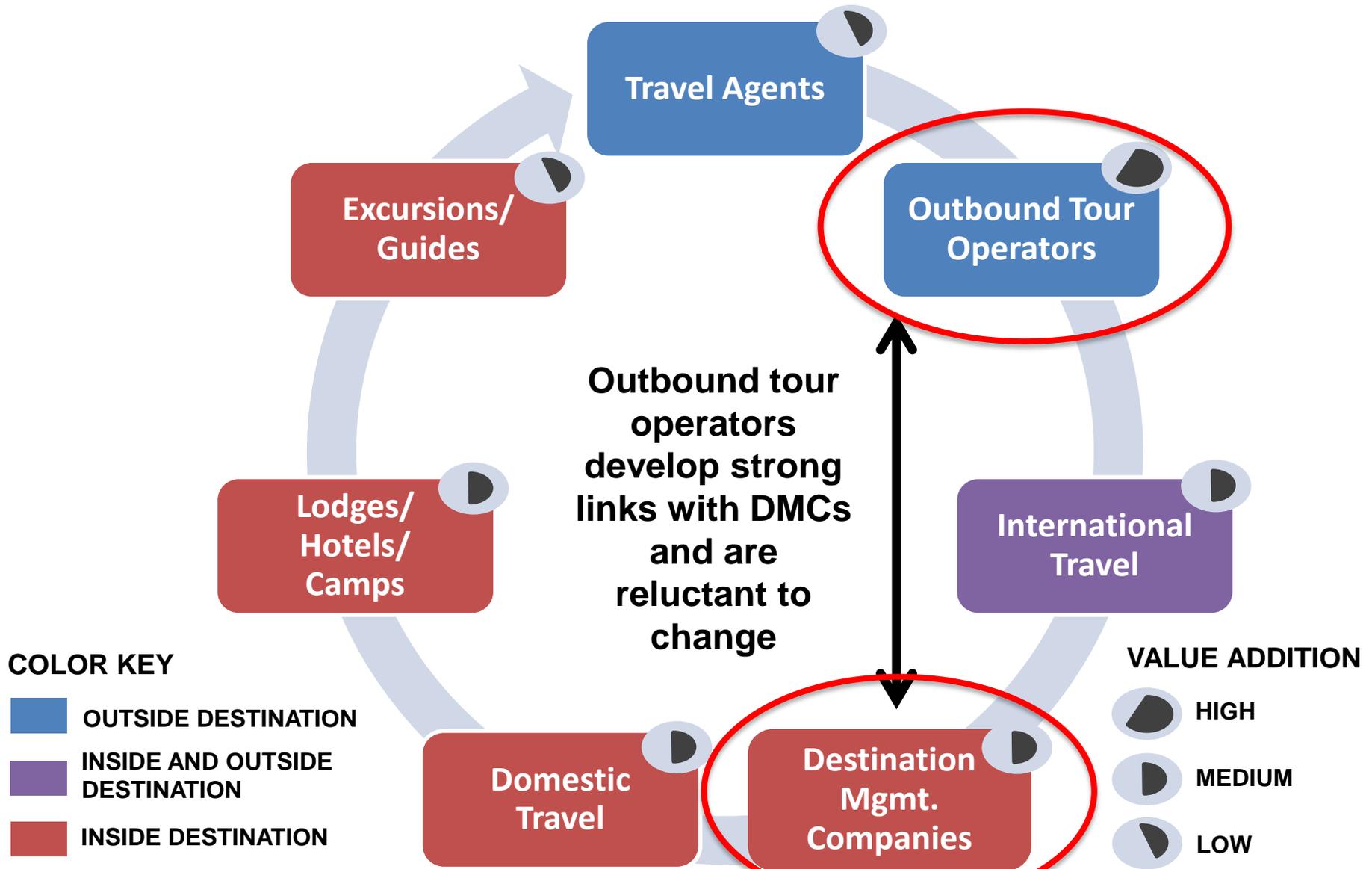
VALUE ADDITION

-  HIGH
-  MEDIUM
-  LOW

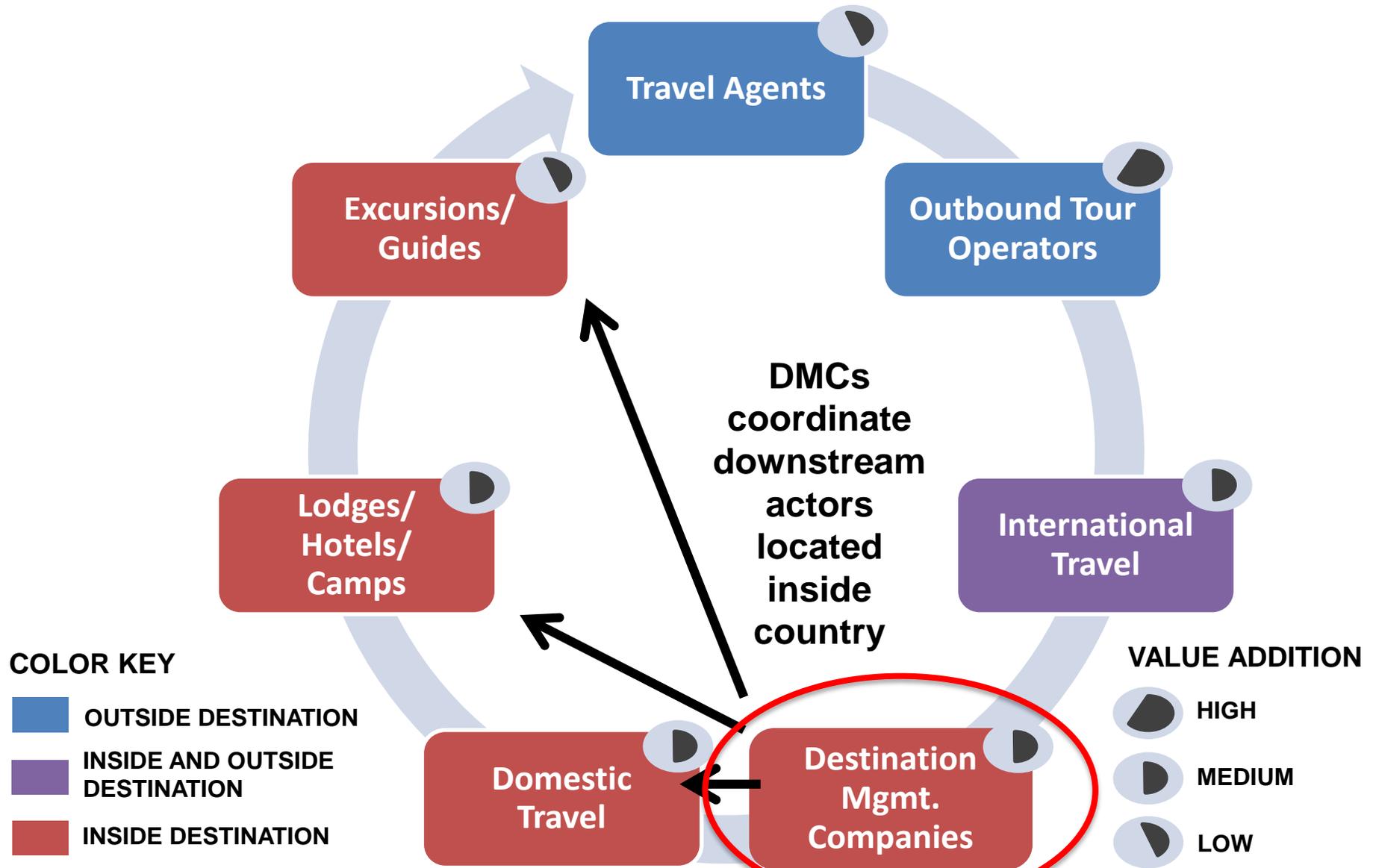
Governance in Leisure Tourism Value Chains



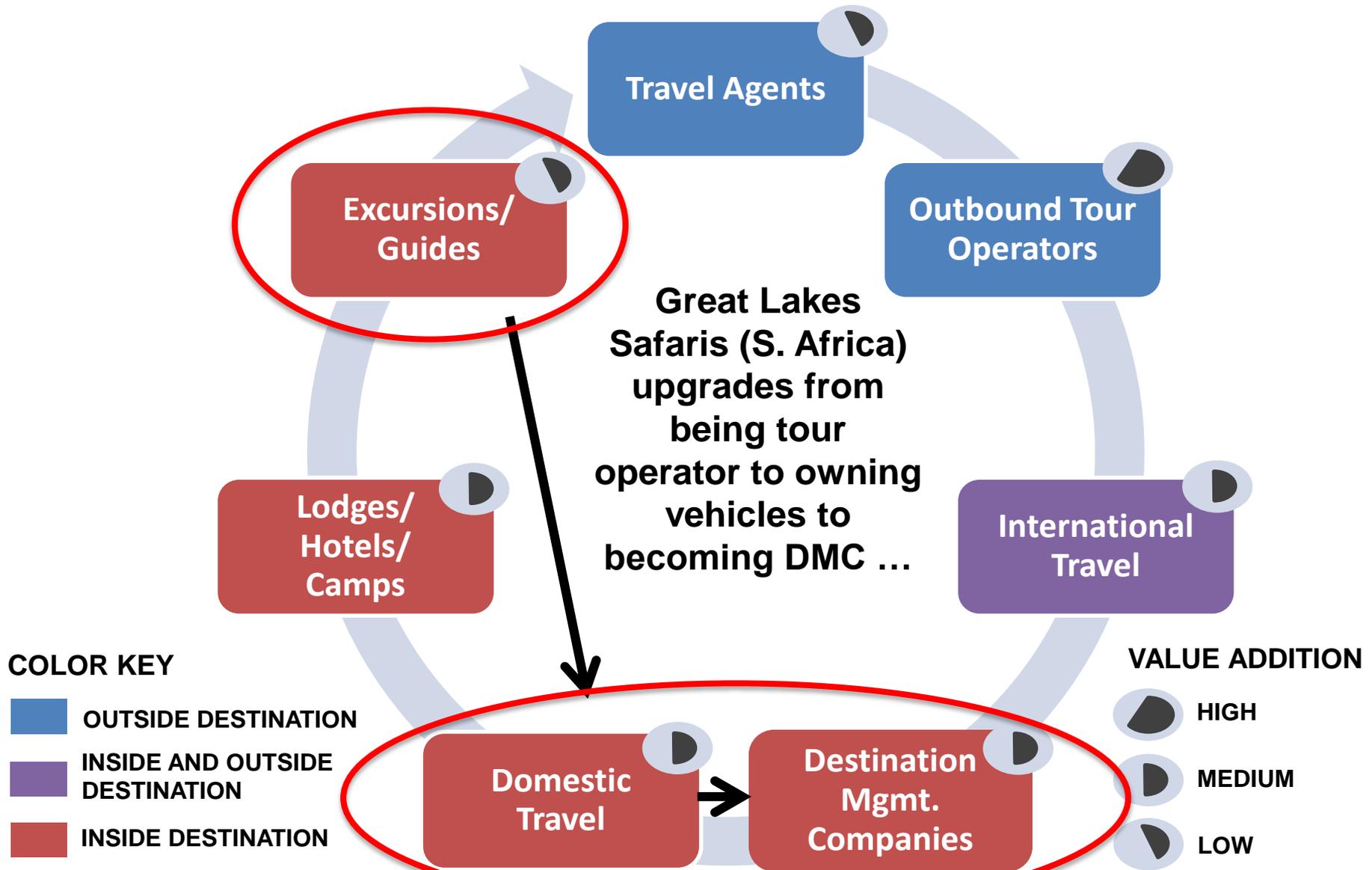
Governance in Leisure Tourism Value Chains



Local Linkages in Leisure Tourism Value Chains



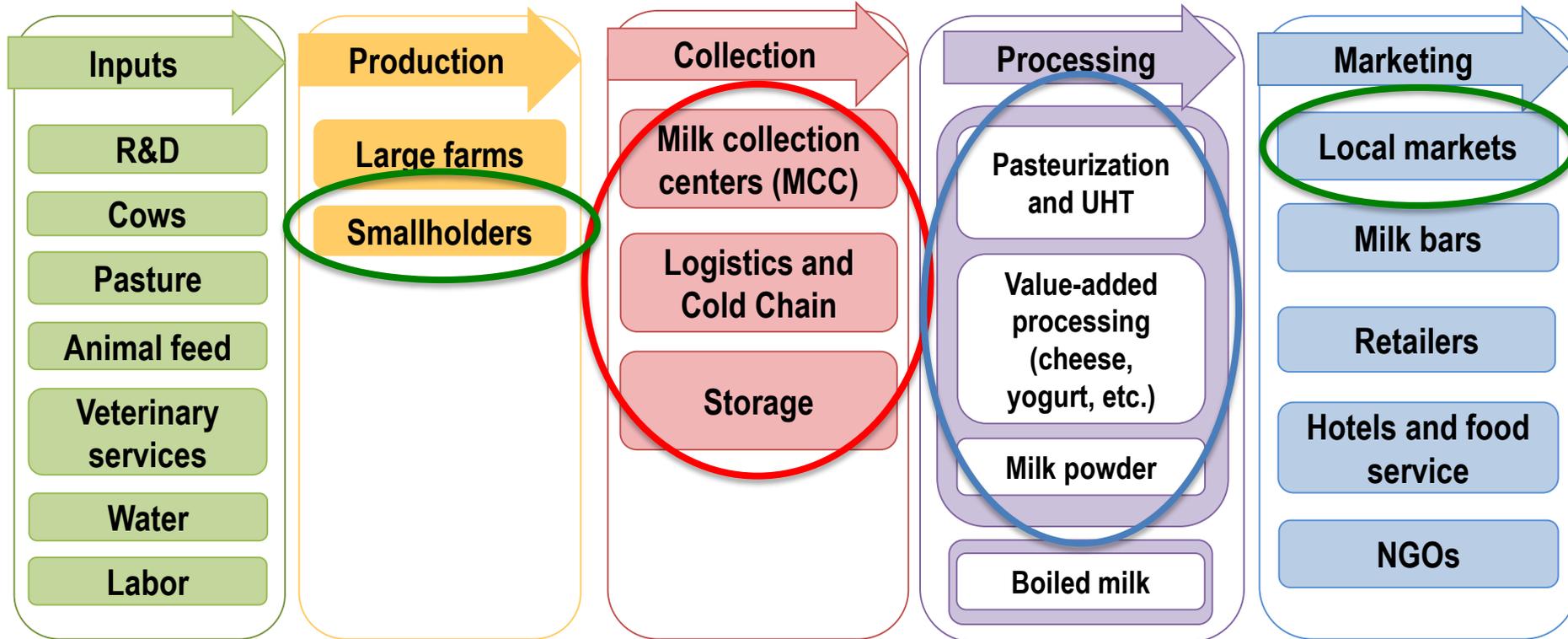
Functional Upgrading in Regional Tourism Value Chains



One Pathway to Regional Tourism Value Chains



The Dairy Value Chain in East Africa



Some key issues

- **Infrastructure: storage, roads and cold chain.**
 - Limits the extent of the market faced by farmers.
- **High proportion (~70%) of milk is unprocessed and marketed informally.**
- **Role of intra- and extra-regional FDI: Kenya and India.**
 - What kinds of backward and forward linkages do these generate?

Policy Issues for East African Value Chains

1. Role of the state
 - Infrastructure, trade & FDI policy, regulation
2. Type of FDI
 - Ownership and up/downstream linkages
3. Public-private collaboration
 - Identifying strategic focus areas in the value chain
4. International benchmarking
 - National and regional comparisons
5. Regional value chains
 - Spillovers, division of labor, common challenges



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THANK YOU

Questions?