EAS 501
Sustainability and Supply Chains

Course Overview

Fall 2025: Lecture 3

Tuesday, September 2, 2025

Structure

1. Intro to Global Value Chains – Gereffi & Fernandez-Stark

2. Group Breakout: Use the GVC analysis framework to analyze a specific product (extractive industry, per last class). Share with class

3. Compare GPNs vs GVCs vs GCCs (Scholvin, 2022)

Importance of Global Value Chains

- The global economy is increasingly structured around GVCs, which shape trade, GDP, and employment. Participation in GVCs is crucial for developing countries to integrate effectively.

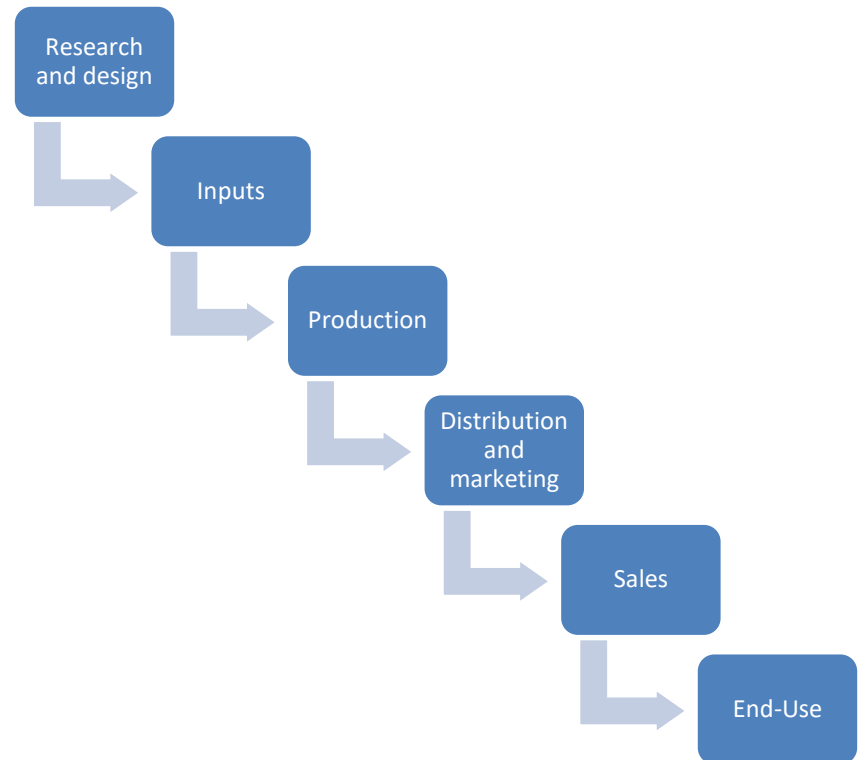# What are Global Value Chains?

- A value chain describes the full range of activities from conception to end use. GVCs link firms, workers, and consumers globally, with governance and upgrading as key concepts.

Dimensions of GVC Analysis

- 1. Input-output structure
- 2. Geographic scope
- 3. Governance
- 4. Upgrading
- 5. Local institutional context
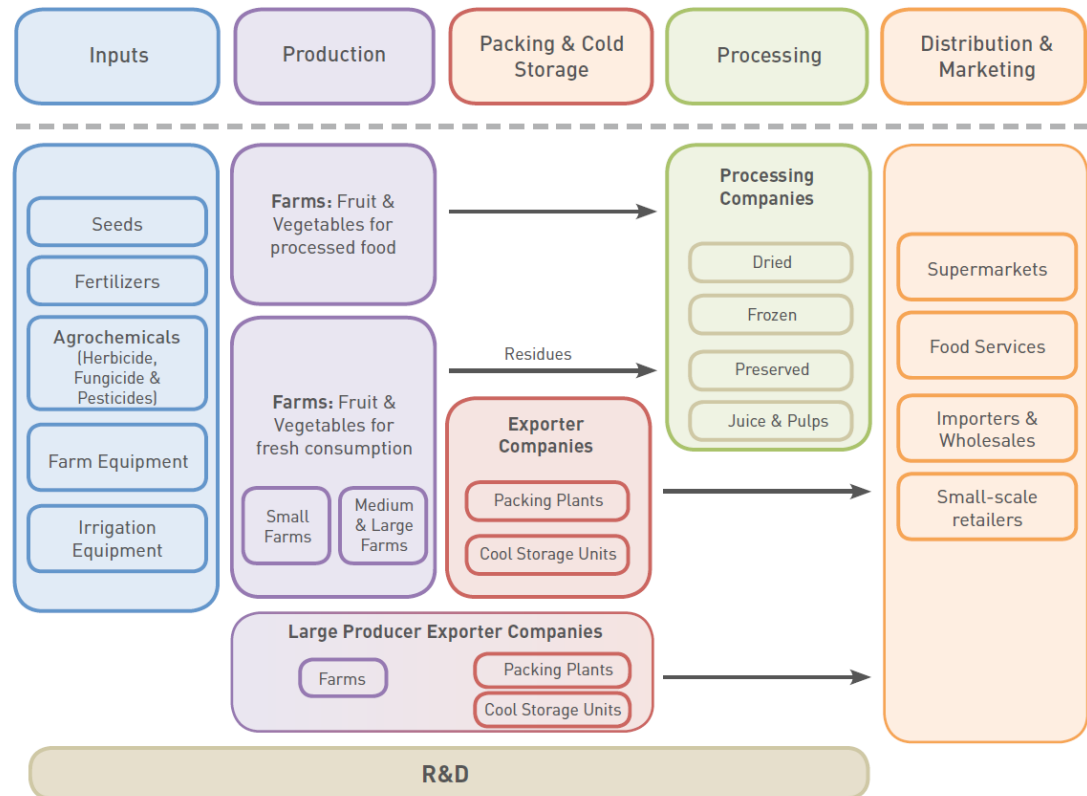- 6. Stakeholders analysis

Input-Output Structure

A. Identify main activities/segments in a global value chain

```
Research and design
    ↓
  Inputs
    ↓
Production
    ↓
Distribution and marketing
    ↓
  Sales
    ↓
 End-Use
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Input-Output Structure

B. Identify the dynamic and structure of companies under each segment of the value chain
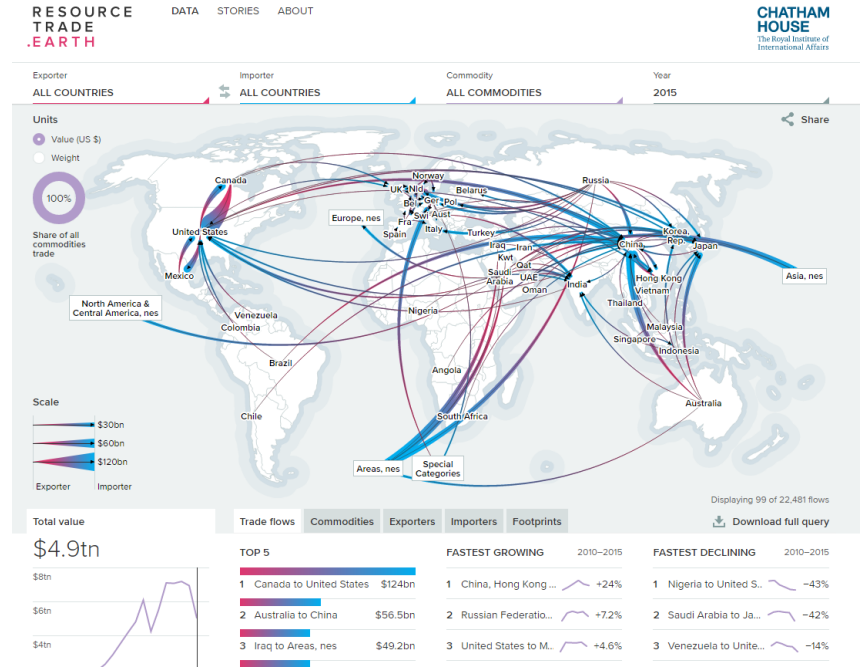

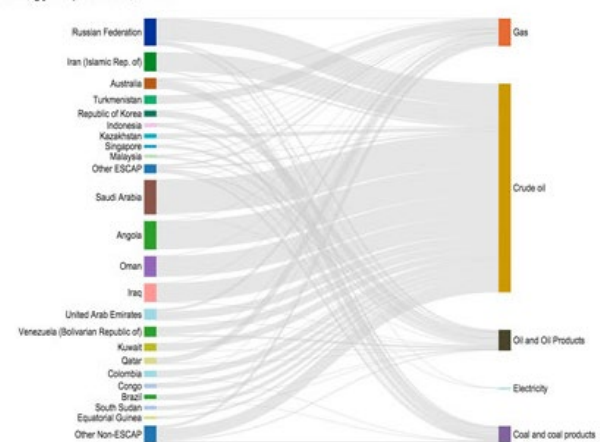Figure 3. Fruit and Vegetables Global Value Chain

Source: Fernandez-Stark et al., 2011d.

Geographic Scope

- Analyze global supply and demand

- Trade flows at each stage of value chain, using international statistics (UN Comtrade) and firm-specific data

- Map how GVCs operate at different geographic scales

Governance

- Governance analysis seeks to understand how a chain is controlled and coordinated when some actors have more power than others
- 'Authority and power relationships that determine how financial, material, and human resources are allocated and flow within a chain (Gereffi, 1994
- Global Commodity Chain Framework (Gereffi, 1994): Producer-driven vs. Retail-driven chains

Producer-Driven Commodity Chain

- Example: Automobile Industry 🚙
- Lead firms: Toyota, VW, Ford, GM
- Governance: Hierarchical – producers control suppliers
- Capital/Technology: Highly capital-intensive (plants, R&D)
- Barriers to Entry: Very high
- Value Capture: Concentrated at producer level

Buyer-Driven Commodity Chain

- Example: Apparel Industry 👕
- Lead firms: Nike, H&M, Gap
- Governance: Networked – buyers focus on branding
- Capital/Technology: Low; labor-intensive production
- Barriers to Entry: Relatively low
- Value Capture: Concentrated at buyer level

Key Distinctions

| Criteria	Producer-Driven (🚗 Automobiles)	Buyer-Driven (👕 Apparel)
Lead Firms	Toyota, VW, Ford, GM	Nike, H&M, Gap
Governance	Hierarchical, producer control	Networked, buyer-led
Capital/Technology	High, R&D, plants	Low, labor-intensive
Barriers to Entry	Very high	Relatively low
Value Capture	Producers	Buyers

Governance – 5 Main Types

- 3 Variables

- Complexity of information shared between actors in a chain
- How the information for production can be codified
- Level of supplier confidence

- Many GVCs can have multiple and interacting governance structures
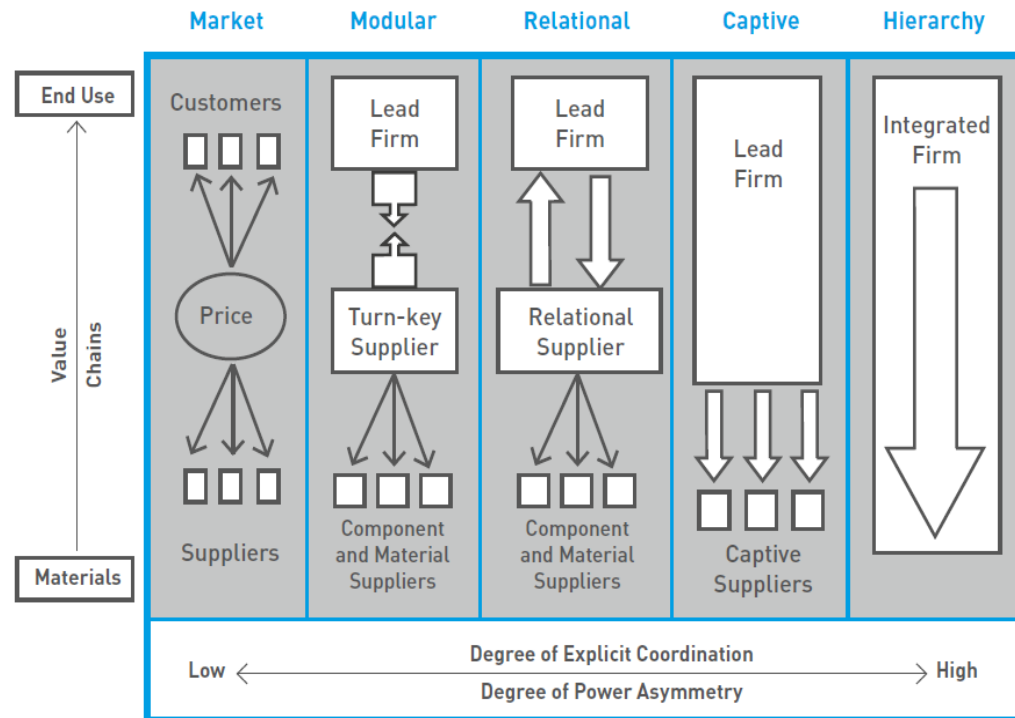
Upgrading in GVCs

- Economic upgrading entails firms, countries, or regions moving to higher value activities in GVCs to increase benefits (e.g., profits, value-added capabilities, security) in global production

Figure 5. Upgrading Stages of Selected Countries in the Fruit and Vegetables Value Chain
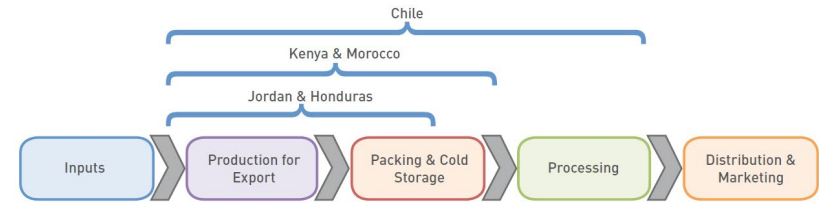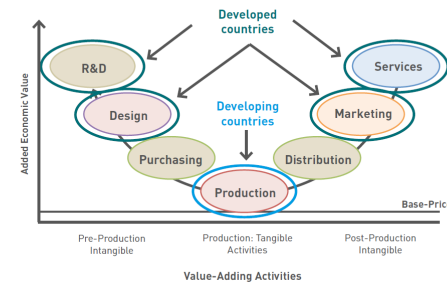
Source: Fernandez-Stark et al., 2011d.

Figure 6. U.S.- Torreon Apparel Value Chain: Activities and Location
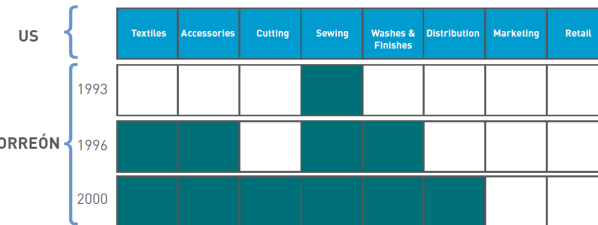
Source: Bair & Gereffi, 2001.

Figure 7. Smile Curve of High-Value Activities in Global Value Chains

Source: Authors based on Baldwin et al., 2014; Shih, no date.

Humphrey & Schmitz (2002): Four Types of Upgrading

- 1. Process upgrading ⚙️ – improving efficiency via better organization or technology

- 2. Product upgrading 📦 – moving into more sophisticated product lines

- 3. Functional upgrading 👨‍💼 – acquiring new functions to increase skill content

- 4. Chain/Inter-sectoral upgrading 🔄 – moving into new but related industries

Fernandez-Stark et al. (2014): Additional Types of Upgrading

- 1. Entry into value chains 🌍 – firms join national, regional, or global chains

- 2. Backward linkages upgrading 🔗 – local firms supply inputs/services to MNCs in-country

- 3. End-market upgrading 🛒 – moving into markets with stricter standards or larger scale demand

Local Institutional Context

- How local, national, and international conditions and policies shape a country's participation at each value chain stage
- Economic conditions: labor costs, infrastructure, finance
- Social contexts: labor skills, education level
- Institutions: tax and labor regulation, subsidies, innovation policy

- How does this relate to GPN actors?

Stakeholders Analysis

Stakeholders include companies, industry associations, workers, educational institutions, workers, educational institutions, government agencies
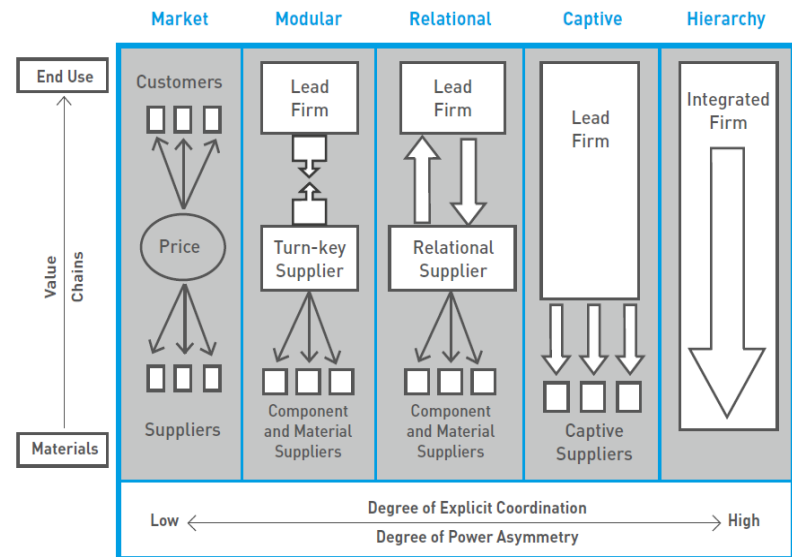
Relations of these actors at local level

- How does this relate to GPN actors?

GVC Analysis – Break into groups

- 1. Input-output structure
- 2. Geographic scope
- 3. Governance
- 4. Upgrading
- 5. Local institutional context
- 6. Stakeholders analysis

- Focus on specific product flow

GPN vs GVC vs GCC

- Compare and contrast these approaches

- Discuss strengths-weaknesses of each approach

- Draw on Scholvin, as appropriate