



Central Statistics Office Ireland

Typologies of global production and value chains

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Presentation Plan

- Background
- Overview of global value chains
- Criteria for identifying economic activity
- Types of global production arrangements
- Issues
- Summary

Background TF Global Production

- **Mandate**
 - Established under the Conference of European Statisticians (CES) and reports to CES Bureau and SG on National Accounts
 - Coordinates with ISWGNA/AEG
 - Consults with OECD NAWP / BOPCOM/ UNECE Group of Experts
- **Members**
 - Canada, Finland, Ireland, Israel, Italy, Mexico, Netherlands, Norway, Sweden and United States
 - Eurostat, IMF, OECD, UNECE, UNSD and WTO

Background

- Task Force on Global Production (TFGP)
 - Globalization Guide (2011) – unresolved issues in relation to global manufacturing
- Main objectives:
 - Guidance on unresolved conceptual issues arising from 2008 SNA and BPM6
 - Guidance on implementation aspects
 - A Guide with recommendations to be finalized by the end of 2014

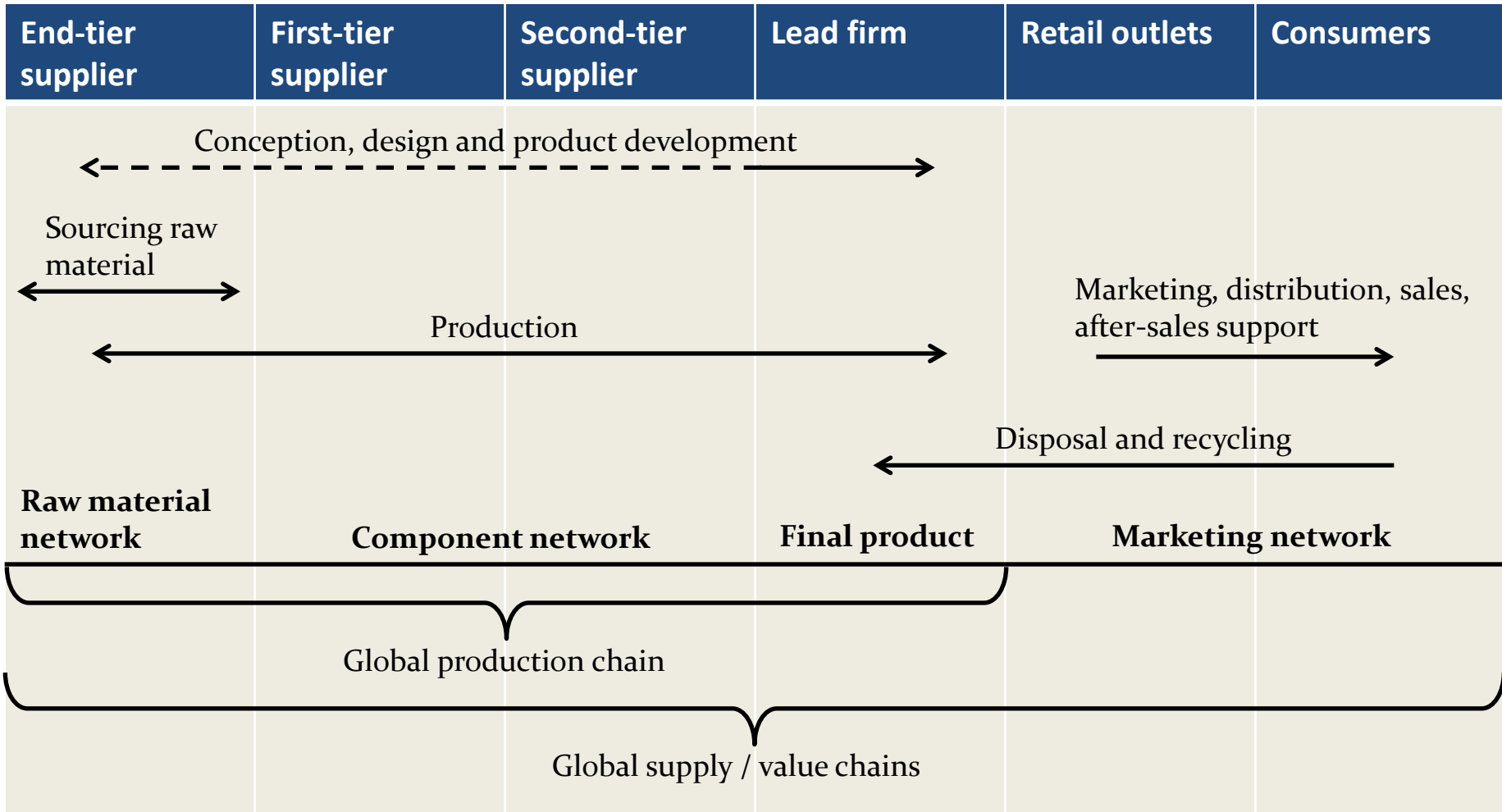
Global Value Chains

- Global Value Chains - Globalization in action
- Globalisation at its heart is about **flows**: flows of materials, goods, information, knowledge, finance and people.
- Global Value Chains are the basis of such flows.
- The **design, configuration and coordination** of such chains to achieve maximum business performance are **central to the role of MNEs**.

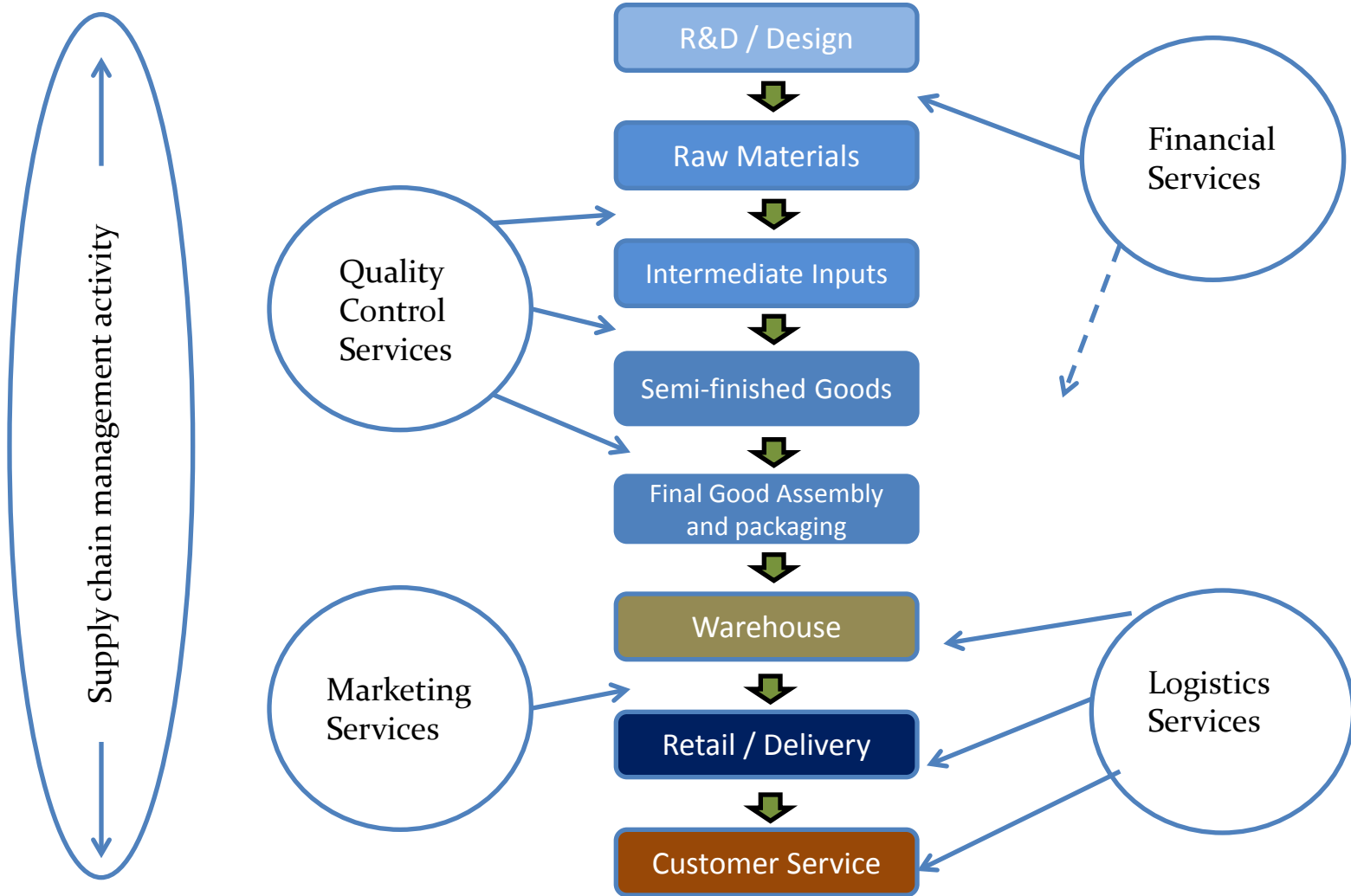
GLOBAL VALUE CHAINS

- Global value chains make it possible **to bring together** all the raw materials & components that combine to make a product or service; **to deliver** it into use through distribution systems; **to support** users on a 24 hour basis; and **to recover and integrate** residue into a waste stream.
- These chains span the world, so that even mundane items now commonly involve **the coordination of flows** of goods, information, finance and people across several continents **while navigating** customs crossings, security screenings and identity verification.
- A global value chain may involve American designers, Indian software writers, Asian manufacturers and European system integrators and support provision

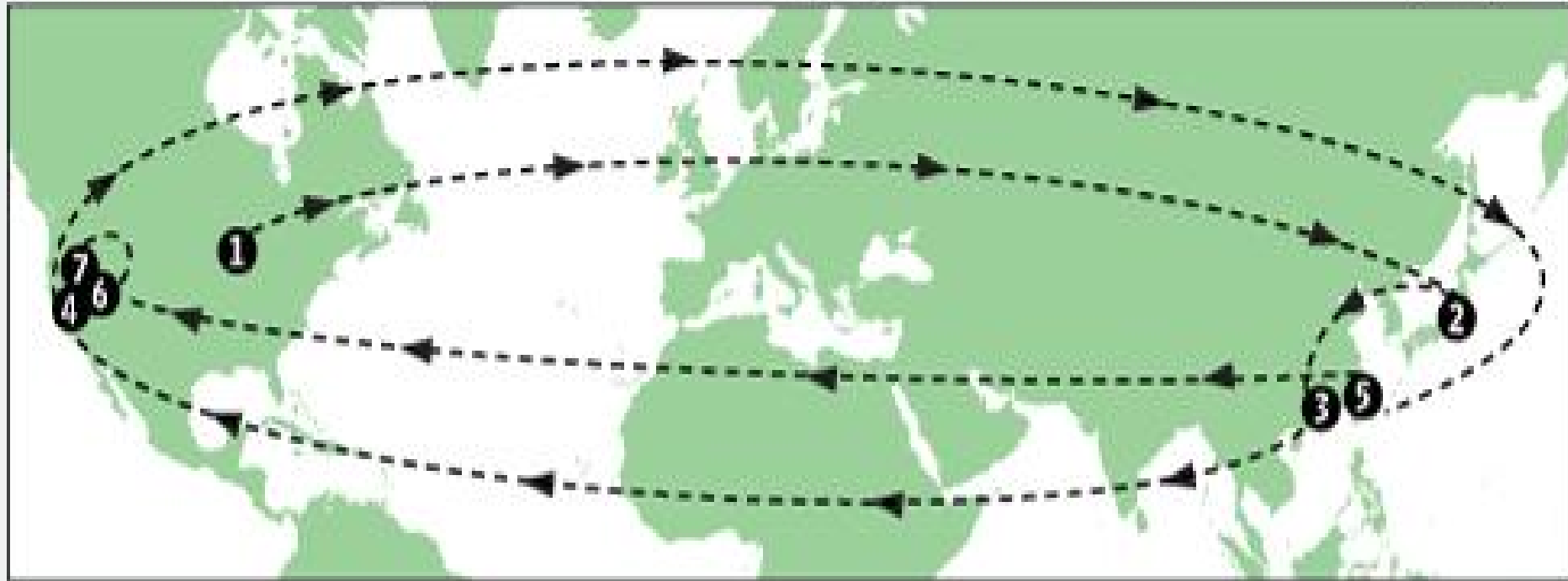
Global value/supply/production chains



A simple supply chain



Life of a DVD Player | How the tech supply chain makes the world's gadgets



1 Minnesota-based **Best Buy** decides how many DVD players it wants, orders from Toshiba...

2 **Toshiba** tells factories-for-hire in China to crank up production ...

3 Those Chinese factories-for-hire order chips from Zoran Corp. ...

4 **Zoran** tells its own subcontractors, including **TSMC**, to get busy making more chips...

5 **TSMC**, in Taiwan buys factory equipment from **Applied Materials** ...

6 In California, **Applied Materials** shops for specialty machine-tool services...

7 Machine-tool firm **D&H Manufacturing**—at the end of the chain—mills aluminum blocks for **Applied**.

Why create a typology?

- A framework to classify the activities of the units participating in GVC and give guidance on recording of their transactions according to current international guidelines
- Tests the typology on real case studies
- Elaborate on the boundary between the different types of Global Production arrangements

Economic Ownership

- Economic ownership at each stage of production process important
 - Material inputs
 - Outputs
 - Intellectual property

Classification of Economic Activity

- Economic ownership of material inputs is decisive
 - If principal owns material inputs then principal is classified as a manufacturer
 - If principal does not own material inputs then is classified as a merchant (trader)

Typology of Global Production Arrangements

- Arrangements Related to Goods
 - Transformation of materials owned by others
 - Merchanting
 - Factoryless manufacturing (including branding)
- Arrangements Related to Services
 - Fragmenting, IPPs
 - Fragmenting, excluding IPPs
 - Subcontracting
- Arrangements Unrelated to Primary Inputs
 - Direct investment enterprises not directly engaged in goods production
 - Direct investment enterprises not directly engaged in services production

Developing Typology

Three dimensions to global value chain arrangements (Gereffi, Humphrey, Sturgeon)

- Complexity of information and knowledge required (product and process specifications)
- Degree to which complexity can be mitigated through codification
- Extent to which suppliers have capabilities to meet buyers' requirements

Governance Types

- Range from market oriented arrangements (principal exerts little control) to hierarchal (principal exerts full control)
- May be helpful in determining how much explicit coordination
- Indication of how much control the principal exerts and associated risk

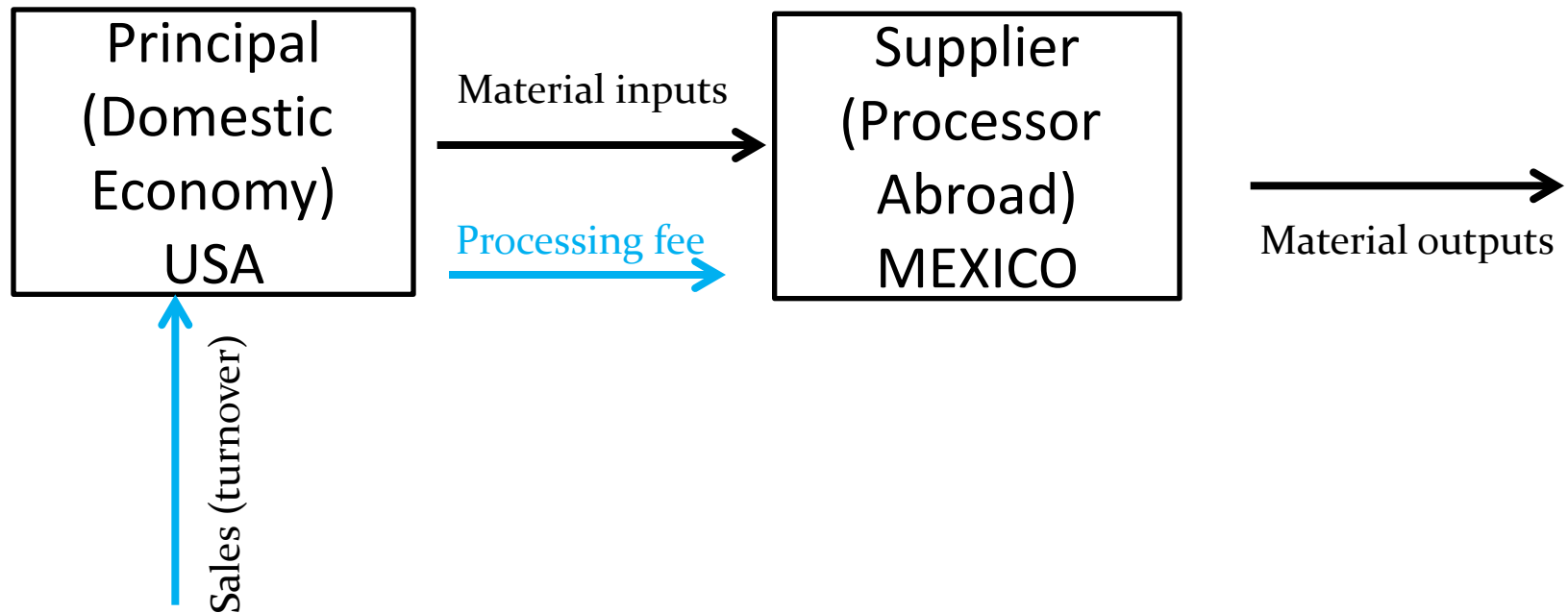
Typology of Global Production Arrangements

- Objective
 - Establish a framework to analyze complex global production arrangements and fit the arrangements into current interpretations of the international guidelines
- Analytic Framework
 - Two entities: 1) domestic and 2) supplier
 - Describe production arrangement from domestic perspective
 - Breakdown economic activities by country of entity
 - Identify economic ownership of inputs and output
 - Assign economic activities (ISIC, Rev. 4)
 - Distinguish type of output
 - Determine a treatment for international transactions

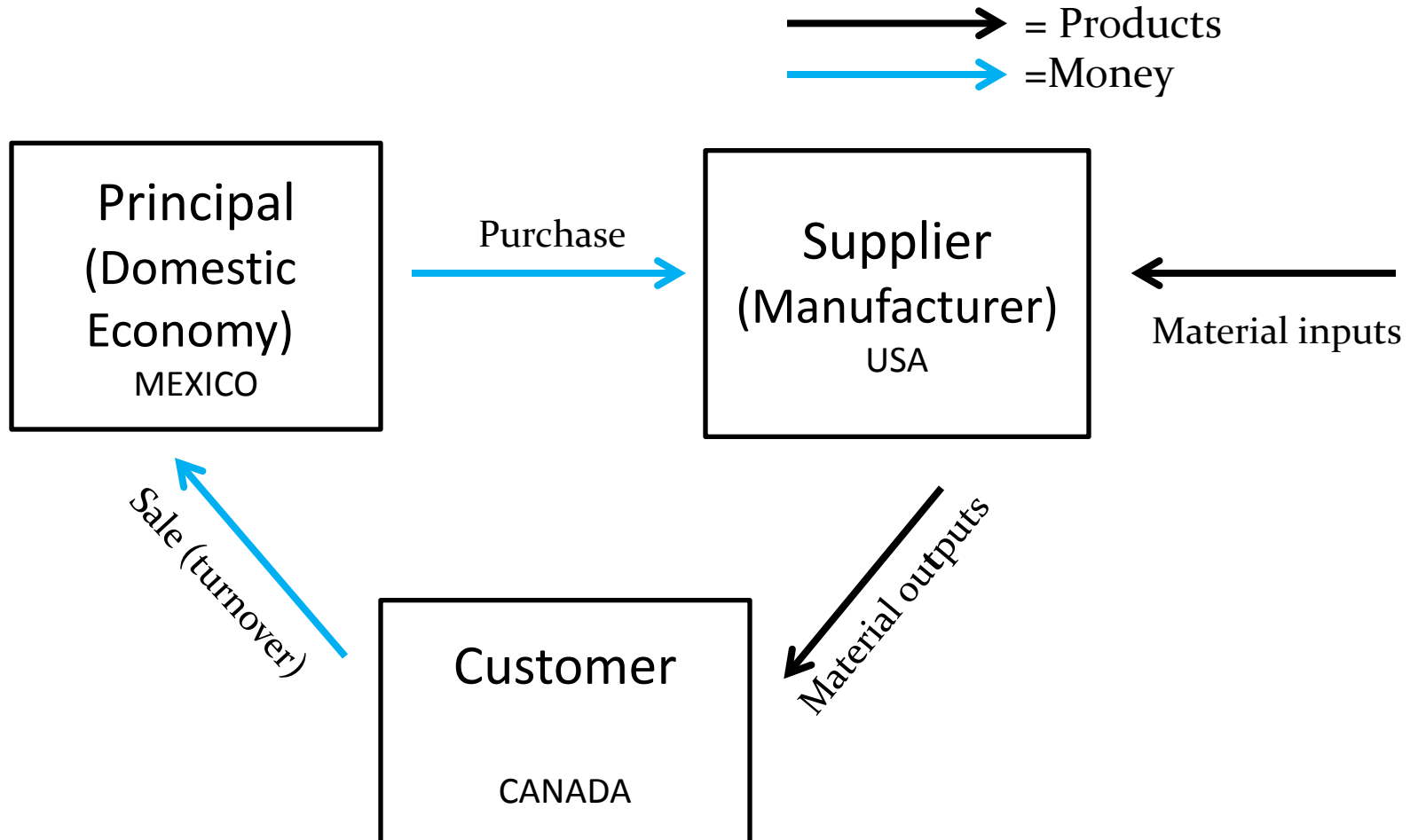
Outsourcing Parts of Production Abroad

Manufacturing services on physical inputs owned by others

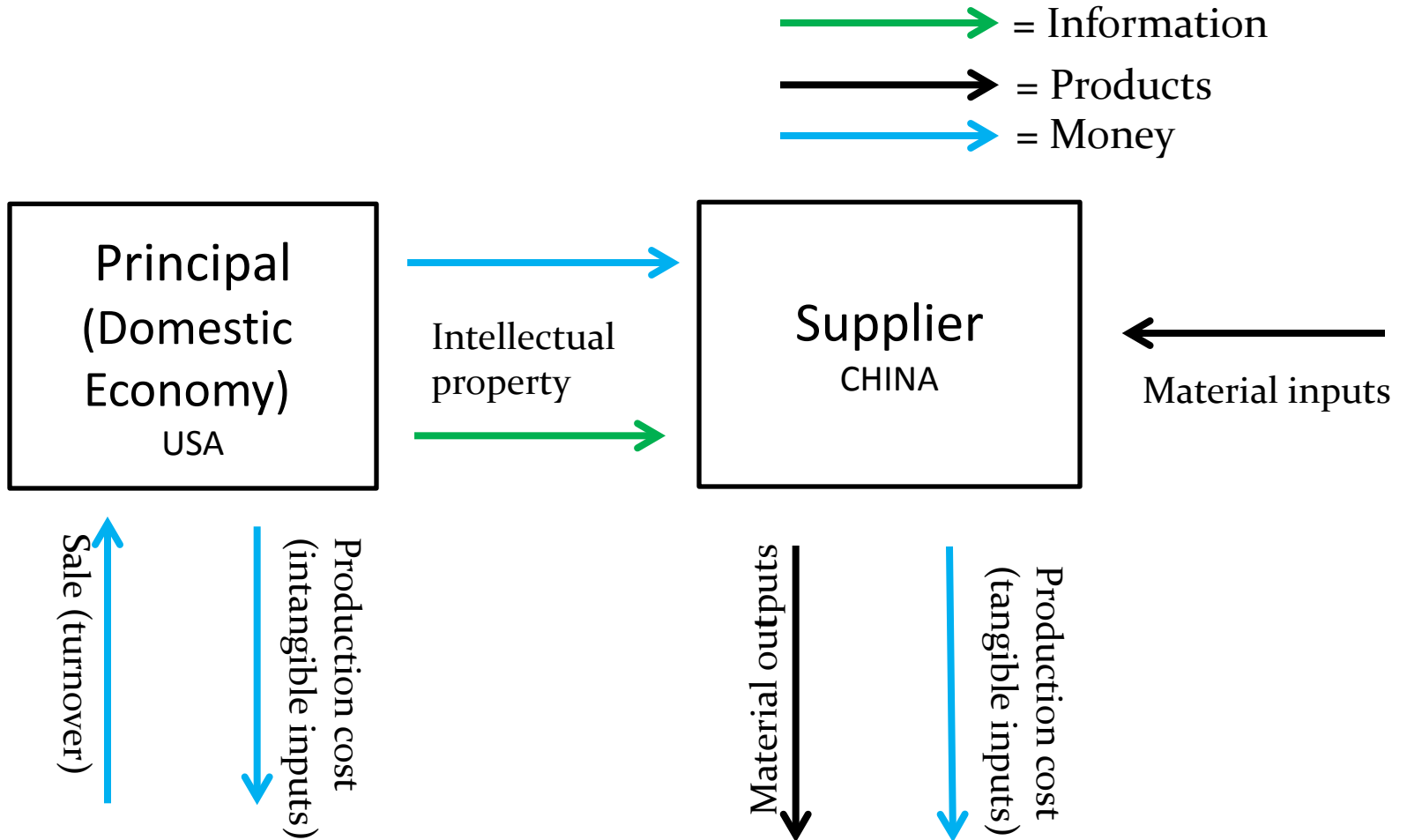
→ = Products
→ = Money



Merchanting



Factoryless manufacturing



Factoryless manufacturing

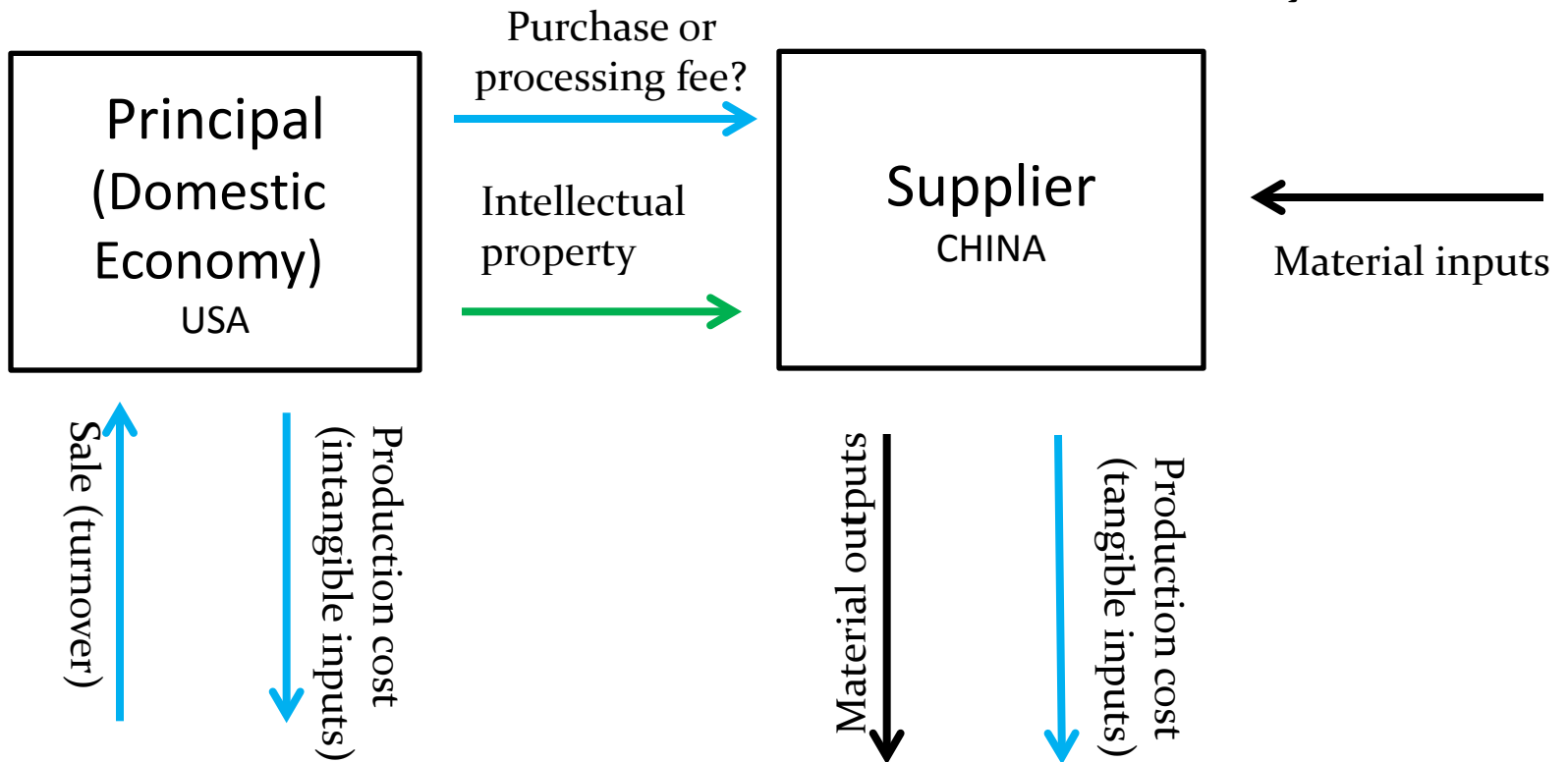
Ownership of inputs?

Economic activity?

→ = Information

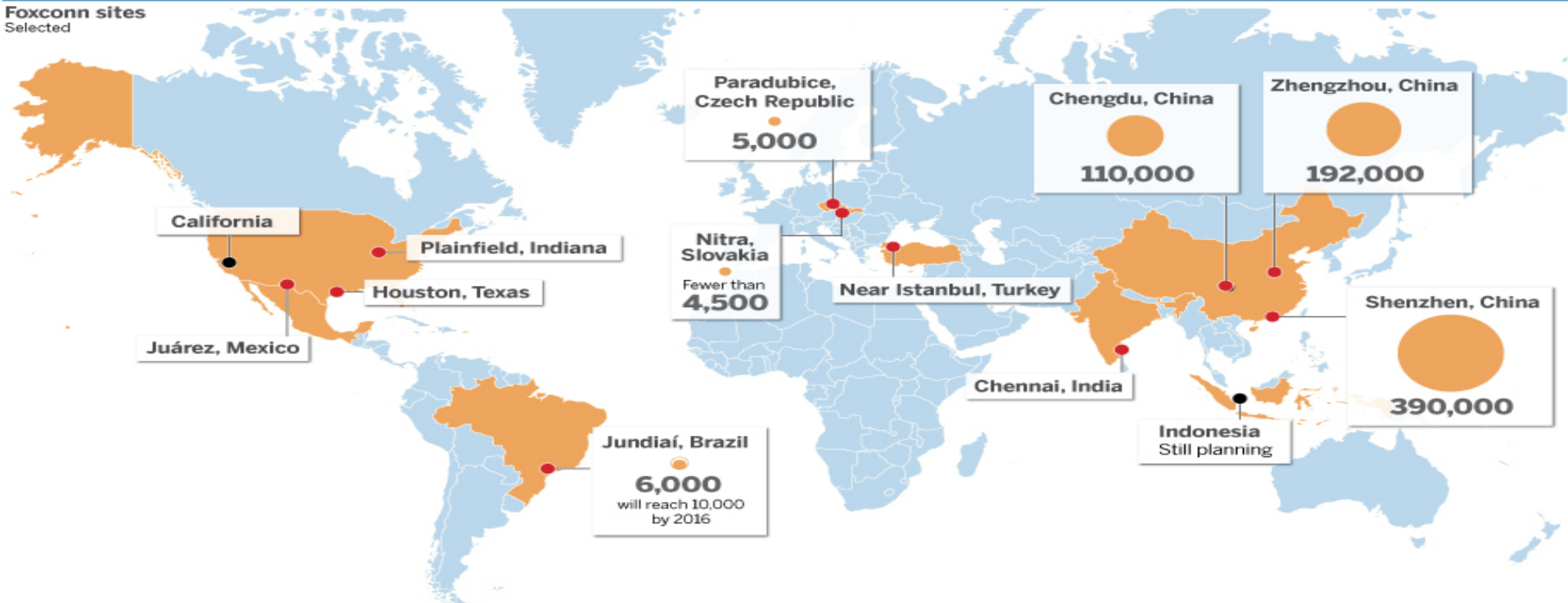
→ = Products

→ = Money

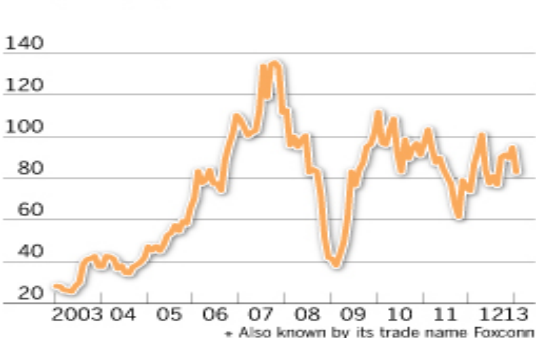


The Foxconn Empire – Contract Manufacturer

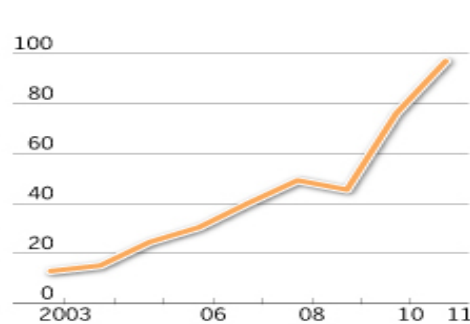
International expansion



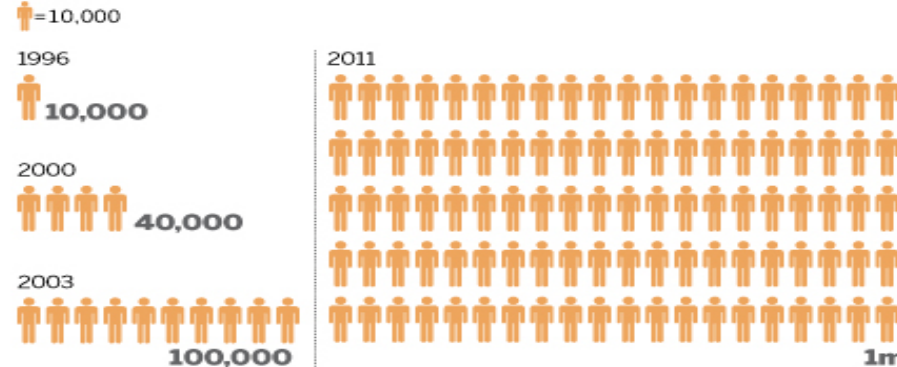
Hon Hai Precision Industry*



Revenues



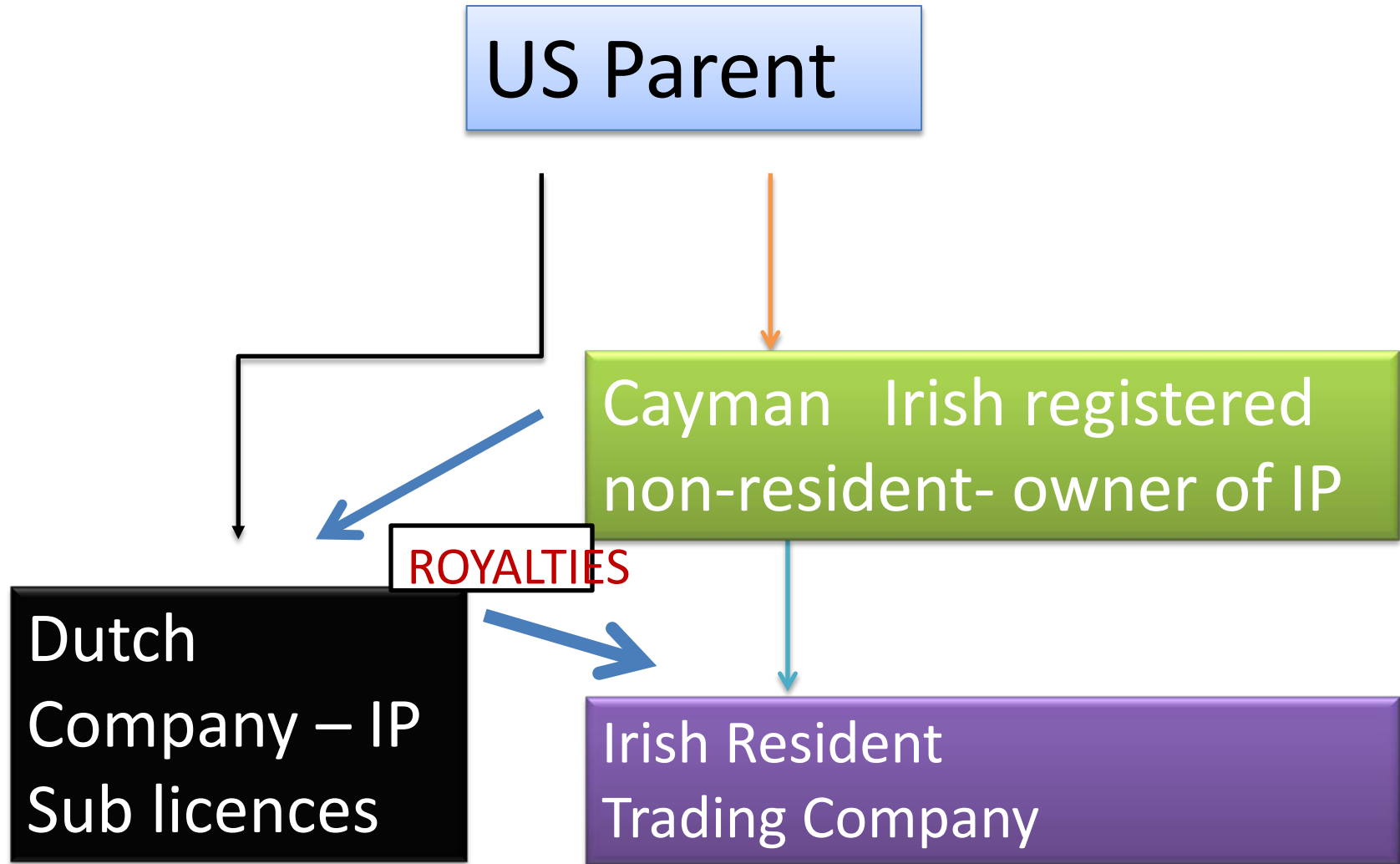
Employees



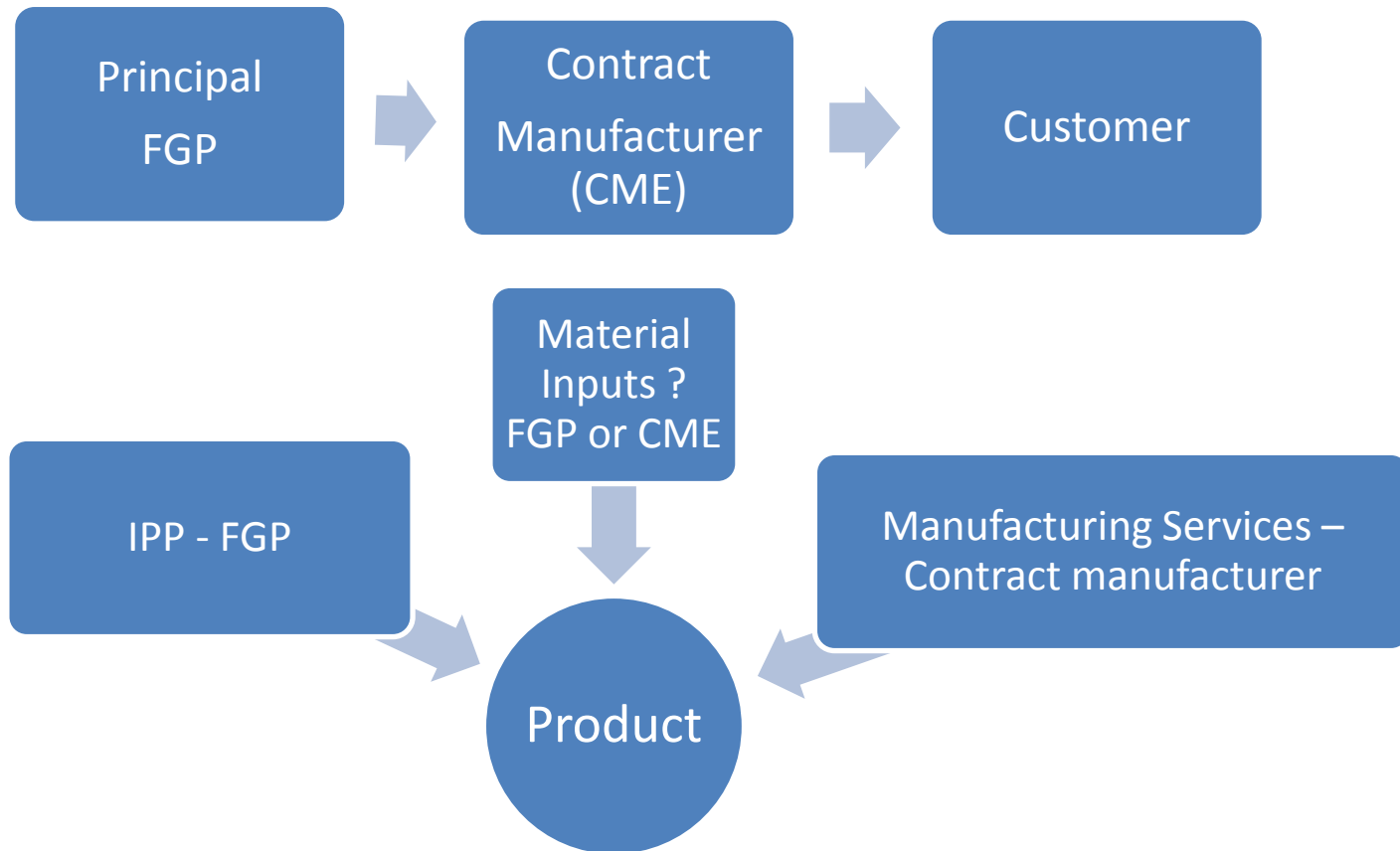
Sources: Thomson Reuters Datastream; company

Source: FT, January 3, 2013.

IPP Ownership



Factoryless Goods Producers



Aspects of FGP Production

- FGP retains
 - Technical know-how
 - Product design
- FGP controls
 - Outcome of production process
 - Access and delivery of final outputs to customers
- CME supplies
 - Prespecified goods at predetermined prices

AEG Presentation and Decision

June 2013

- “The Advisory Expert Group on National Accounts:...*Agreed that factoryless producers — supplying intellectual property capital and marketing services, and controlling the production process while using contract manufacturers to produce goods — are to be considered goods producers and should not be classified in distributive services*

Issues

- At AEG 2014 TF presented two papers
 - Economic ownership of IIP ? How to identify the economic owner?
 - Factoryless Goods Producers - how we classify their transactions and the activity ?
- Challenge of recording trade on a change of economic ownership basis – how?
- Production abroad - How to measure?

TF Next Steps

- Finalization of the Guide and Global Consultation
- Testing and evidence to support proposals - medium term
- Future work or research agenda
 - Price and volume measures for specific products
 - International Data Pooling - data exchange
 - Brands and other IP related issues