Introduction and Tutorial: Supply Chain Globalization

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Traditional Wisdom

- Supply chain = auto industry and logistics
- Globalization = only for big companies
Almost every business is involved in one or more supply chains

- Typical elements of business = a typical supply chain
  - Design, including design tools
  - Subsystems design and manufacturing
  - Final manufacturing and assembly / implementing services
  - Sales, marketing, distribution
  - Research and development
  - Business processes (personnel, financials, etc.)

Globalization now has an impact on every company, large and small
Times have changed: what happened?

- The Third Industrial Revolution: information and communications technologies
  - New technologies enable real-time communications, integration of communications and data exchange
  - Result: new business opportunities, and new competition

- Subsequent economic tightening
  - More severe economics control how one does business
  - (One must use new technologies and new opportunities, and adjust core competencies to stay competitive)
Legacies of the ICT Revolution

- **Rise of global outsourcing**
  - **First Generation**: distributors in foreign markets
  - **Second Generation**: self-contained supply chain segments such as manufacturing, customer services

  ∗ From now: **Third Generation** = Product design, R&D, partnering for coordination of global market entry
    - Requires reliable, cheap, rich real-time communications
    - Requires foreign language, cross-cultural expertise

- **Lower barriers to entry** (yields many start-up companies)
Example: The (computer) chip industry

- Standardized system architectures caused vertically integrated business models to disintegrate

- Outsourcing:
  - First to go was chip packaging
  - Then manufacturing
  - Now, some merchant trading in embedded chip designs
  - During this time, growth of
    - EDA (software design tools) industry
    - Manufacturing equipment industry
The chip industry at present

- **Polarizing** into bigger companies and many start-up companies
  - Mid-sized chip companies are having the greatest difficulties

- **Experimentation with business models**
  - Contract manufacturers provide libraries of “cells” for design
  - EDA firms doing design consulting, etc.

- **Joint ventures to share R&D cost**

- **Globalization of the supply chain**
Today’s program: Opportunities for entrepreneurs

(Dasher’s analysis)

- Dr. Tang Jie: supply chain globalization from the viewpoint of an exciting new region
- Mr. Bingwei Yao: case study of VL Inc., a start-up company with a component technology (and therefore part of various supply chains)
- Mr. Hiroshi Ishiwata: investor’s perspective into what supply chain globalization means for start-up companies
- Panel discussion: presenters joined by Prof. Keizo Baba (KUT), Dr. Arun Shah (iSpring Corp.)
  - Opportunities for entrepreneurs
  - What resources they need in this new environment