Boeing 787

• Issues
  – Strategic design of supply chain: Outsourcing/VI decisions
  – Nature of relationships
  – Limits of outsourcing?

• Discussion
  – Structure of supply chain
  – Why did they do this?
  – What is their strategy?
  – What happened?
  – Discussion
Partners Across The Globe Are Bringing The 787 Together

THE COMPANIES

US
- BOEING
- GE
- GOODRICH
- VOUGHT

CANADA
- BOEING
- MESSIER-DOWTY

AUSTRALIA
- BOEING

JAPAN
- KAWASAKI
- MITSUBISHI
- FUJI

KOREA
- KAL-ASD

EUROPE
- MESSIER-DOWTY
- ROLLS-ROYCE
- SAAB
- ALenia
- LATECOERE

Image by MIT OpenCourseWare.
Summary: What factors do we consider in Vertical integration and value chain design

- Strategic
- Market
- Economic
- Product and technology
Strategic Factors

• Do VI/supply chain choices fit strategy?
• Is the operation core?
• Access to capacity
• Scale, competency, and skill match
Market Factors

• Market power and structure (barriers, availability of complementary assets, capital structure)
• Economies of scale
• Market reliability and feasibility of alternatives
• Asset specificity and dependency risk
Economic Factors

- Factor costs and globalization
- Investment costs
- Transaction costs
- Legacy issues
Product and Technology Factors

• Modularity of product architecture
• Technology differentiation
• Intellectual property
Some Historical Notes

• Trends in transaction costs
• Successful alternatives such as contracts and joint ventures
• Factors that in general are leading away from integration
  – Information technology and e-commerce
  – Past advantages of tariff, pricing, scale, and oligopolies
  – Current advantages of focus, risk management, and economies of scale and scope
  – Globalization
• BUT, there is some evidence of a fad
Spectrum of Relationships

- Arm’s length
- Modified vendor relationships
- Contracts
- Collaboration
- Equity stakes
- Joint ventures
- Asset ownership
- Full ownership
15.769 Operations Strategy
Fall 2010

For information about citing these materials or our Terms of Use, visit: http://ocw.mit.edu/terms.