Benefits of Global Operations

- Reduce Direct and Indirect Costs
- Reduce Capital Cost
- Reduce Taxes
- Reduce Logistics Costs
- Overcome Tariff Barriers
- Provide Better Customer Service
- Spread Foreign Exchange Risk
- Build Alternative Supply Sources
- Preempt Potential Competitors
- Learn from:
  - Local Suppliers/Customers/
    Competitors/Foreign Research
    Centers
- Attract Talent Globally

Offshoring Opportunities

Changing Conditions

- Need to treat foreign facilities or activity centers as sources of competitive advantage
  - Trade pacts, reduction of tariffs
  - Lower need to set up foreign factories to overcome trade barriers
  - Increased manufacturing/service sophistication
  - Less emphasis on low wages
  - Pressure to create faster transfer of ideas from development to delivery
  - Need for closer inter-functional relationships

Upgrading the Strategic Role

- Focus on intangible benefits
  - e.g. learning from local suppliers, gaining experience
- Cultivate competencies
  - Improve the inside
  - Develop external resources
  - Take a global mandate
- Create a robust network
  - Can absorb impacts of changes in the environment
  - Plan for long-term commitment

Paths to Higher Strategic Roles

Types of Product or Service Factories

- Offshore product or service factory
  - Minimum setup investments, low-cost production
- Source product or service factory
  - Broader strategic role, greater local control
- Server product or service factory
  - Set up to offset costs (taxes, duties) and risk (FOREX)
- Contributor product or service factory
  - Separate functions (R&D), more responsibilities
- Outpost product or service factory
  - Primary role: information collection
- Lead product or service factory
  - Creates new processes, products, and technologies
Sourcing Strategy

Historical and Current Frameworks in Sourcing

Theme 1

Five Themes
- Historical and Current Frameworks of Sourcing
- Global Outsourcing
- Supplier Relationships
- Supplier Development
- Advances in Sourcing – Practices and Tools

PORTER’S MODEL

Historical and Current Frameworks in Sourcing

Theme 1

Disintegrated Supply Chain

Internal Integration

Source: Global Benchmarking and Supply Chain Project - MSU
Enterprise Extension

Stages of Global Sourcing Evolution*

- **Basic Beginnings**
  - Quality/cost teams
  - Ad hoc supplier alliances
  - Global sourcing

- **Moderate Development**
  - Longer-term contracts
  - Strategic supplier alliances
  - Supplier development

- **Limited Integration**
  - Volume leveraging
  - Cross-functional sourcing teams
  - Total cost of ownership

- **Fully Integrated**
  - Supply base consolidation
  - International sourcing
  - Parts/services standardization

Factors affecting Global Outsourcing Decisions

- Comparative Advantage- low price contracts;
- Hassles in manufacturing – If can not be made in-house outsource
- Decisions are made about individual parts rather than product families

Result of wrong outsourcing strategy

- Lost Focus- Companies are trying to catch up with small manufacturers in cost and quality;
- Companies are manufacturing commodity products to achieve economies of scale; and
- Erosion in capability or core competency of the company.

Reasons for wrong outsourcing decisions

- Lack of coordination between different functions, inconsistent priorities and lack of accountability;
- Manufacturers fear long contracts/relationship would increase the bargaining power of suppliers;
- Managers lack of focus. They suffer from “Do it all here” attitude;
- Companies had no analytical tool to distinguishing core parts from commodities; and
- Capacity & Labor issues- Capacity utilization and labor efficiency.

Global Outsourcing Principles

Theme 2

Source: Global Benchmarking and Supply Chain Project - MSU

* Adapted from Monczka et al (2000)
Outsourcing Model

Based on the following three main principles:

- Focus on critical components and core competency;
- Outsource components where suppliers have distinct competitive advantage; and
- Use outsourcing to generate employee commitment and improve productivity.

Supplier Relationships

Theme 3

Kieretsu

- A complex network of Japanese firms which pursues sourcing (goods, services & finances) from within the network
- Characteristics of a typical kieretsu
  - Several large firms like a major bank, trading company, chemical firm, steel unit, automobile industry etc
  - Cross-holding, favoritism, long-term relationship & interlocking directorates

Evolution of Kieretsu

- Article compares the different approaches to Kieretsu by Matsushita, Hitachi and Toyota
- Additional article – HBR article on Chrysler’s experience with Kieretsu

Interesting updates

- The collapse of the powerful Mitsubishi Kieretsu
- Nissan comes out of heavy losses and survival uncertainty when Carlos Ghosn takes charge and breaks the Kieretsu model

Supplier Development

Theme 4
Steps to Effective Supplier Development

- Identify critical commodities
- Identify critical suppliers
- Form a cross-functional team (internally)
- Meet with suppliers’ top management
- Identify key projects
- Define details of projects
- Monitor status and modify strategies

Pitfalls

- Based on 200 companies with 83 actually responding in a variety of industries.
- Pitfalls generally occur in the last 3 or 4 steps.
- Three types of pitfalls
  - Supplier-specific
  - Buyer-specific
  - Buyer-supplier interface

Advances in Sourcing: Practices and Tools

Key Sourcing Processes and Associative Tools

Sourcing Processes

- Supplier Scoring and Assessment
- Supplier Selection and Contracts
- Design Collaboration
- The Procurement Process
- Sourcing Planning and Analysis

The Role of Sourcing in a Supply Chain

- Sourcing is the set of business processes required to purchase goods and services
- Sourcing processes include:
  - Supplier scoring and assessment
  - Supplier selection and contract negotiation
  - Design collaboration
  - Procurement
  - Sourcing planning and analysis
Benefits of Effective Sourcing Decisions

- Better economies of scale can be achieved if orders are aggregated.
- More efficient procurement transactions can significantly reduce the overall cost of purchasing.
- Design collaboration can result in products that are easier to manufacture and distribute, resulting in lower overall costs.
- Good procurement processes can facilitate coordination with suppliers.
- Appropriate supplier contracts can allow for the sharing of risk.
- Firms can achieve a lower purchase price by increasing competition through the use of auctions.

Supplier Scoring and Assessment

- Supplier performance should be compared on the basis of the supplier’s impact on total cost.
- There are several other factors besides purchase price that influence total cost.

Supplier Assessment Factors

- Replenishment Lead Time
- On-Time Performance
- Supply Flexibility
- Delivery Frequency / Minimum Lot Size
- Supply Quality
- Inbound Transportation Cost
- Pricing Terms
- Information Coordination Capability
- Design Collaboration Capability
- Exchange Rates, Taxes, Duties
- Supplier Viability

Supplier Scoring and Assessment

- Supplier Scorecard – Metalcraft
  - Used in the sourcing module of IBUS 736
  - Several local companies use this tool
    - Bose
    - Sonoco
  - Total Cost of Ownership – USC project – Class of 2003

Supplier Selection

- Single vs. Multiple sourcing
  - Single sourcing facilitates asset sharing, relationship building and commitment
    - Downside is highly risky
  - Multiple sourcing promotes competition
    - Downside is promotes opportunism among suppliers
  - Example: Lopez era in GM
- Scorecards
  - Raises the objectivity level of assessment
  - Promotes benchmarking
  - Dynamic/Real time assessment
  - Communication tool

Supply Chain Contracts

- Contracts to increase product availability
  - Incentives to stock
- Contracts to coordinate supply chain costs
  - Forecasting/Planning (CPFR)
- Contracts to induce performance improvement
  - Asset Specificity, Shared savings, Liberal credit terms

Comment: Government agencies tend to be experts in contract definition and stipulation; (Example: USC sourcing projects)
Design Collaboration

- 50-70 percent of spending at a manufacturer is through procurement
- 80 percent of the cost of a purchased part is fixed in the design phase
- Design collaboration with suppliers can result in reduced cost, improved quality, and decreased time to market
- Important to employ design for logistics, design for manufacturability
- Manufacturers must become effective design coordinators throughout the supply chain

The Procurement Process

- The process in which the supplier sends product in response to orders placed by the buyer
- Goal is to enable orders to be placed and delivered on schedule at the lowest possible overall cost
- Two main categories of purchased goods:
  - Direct materials: components used to make finished goods
  - Indirect materials: goods used to support the operations of a firm
- Differences between direct and indirect materials

Classification of Purchased Items

<table>
<thead>
<tr>
<th>Use</th>
<th>Direct Materials</th>
<th>Indirect Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Cost of Goods Sold</td>
<td>SG&amp;A</td>
</tr>
<tr>
<td>Impact on Production</td>
<td>Any delay will delay production</td>
<td>Less direct impact</td>
</tr>
<tr>
<td>Processing Cost Relative to Value of Transaction</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Number of Transactions</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

Sourcing Planning and Analysis

- A firm should periodically analyze its procurement spending and supplier performance and use this analysis as an input for future sourcing decisions
- Procurement spending should be analyzed by part and supplier to ensure appropriate economies of scale
- Supplier performance analysis should be used to build a portfolio of suppliers with complementary strengths
  - Cheaper but lower performing suppliers should be used to supply base demand
  - Higher performing but more expensive suppliers should be used to buffer against variation in demand and supply from the other source
Sourcing Planning and Analysis

- Aggregate the spending
- Build a supplier portfolio
- Allocate demand to suppliers

- Enabling tool: Supplier Relationship Management (SRM) module
- Example: Boeing’s use of SRM for parts commonality consolidation and sourcing

Making Sourcing Decisions in Practice

- Use multifunction teams
- Ensure appropriate coordination across regions and business units
- Always evaluate the total cost of ownership
- Build long-term relationships with key suppliers