***Supply Chain Management – Relationships***

Fall 2019

🡨 Flow of Information 🡨

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| Supplier | 🡪 | Manufacturer | 🡪 | Distributor | 🡪 | Retailer | 🡪 | Customer |

🡪 Flow of Material 🡪

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| **Relationships** |
| ***Outline*** | ***Initial Take-aways*** |
| \*Alliances  -3PL  -RSP  -DI | *From Simchi-Levi Text, Chapter 8.*  \* An integration of companies that shares risk & rewards, information & knowledge, capabilities & expertise, goals & growth.  -3PL. Third-party Logistics. Relationship with external partners to the supply chain.  -RSP. Retailer Supplier Partnerships. Relationship between upstream and downstream partners in the supply chain.  -DI. Distributor Integration. Relationship between partners at the same level in the supply chain. |
| \*Outsourcing  -Advantages&Disadvantages  -Considerations.  --Drivers.  --Products.  -Procurement Strategy.  --Supply side.  --Demand side.  \*e-Markets.  -Public.  -Consortium.  -Content.  -Private. | *From Simchi-Levi Text, Chapter 9.*  \*Outsourcing  -Advantages & Disadvantages.  -Considerations.  --Drivers. Limited capacity & limited knowledge.  --Products. Modular products & integral products.  -Procurement Strategy.  --Supply side. Kraljic supply side of profit impact & supply risk.  --Demand side. Fisher demand side of functional products & innovative products.  \*e-Markets.  -Public. Supplier driven horizontal market.  -Consortium. A buyer driven vertical market.  -Content. Either a supplier driven horizontal market for MRO content, or a buyer driven vertical market for industry-specific content.  -Private. A buyer driven vertical market. |

**Alliances & Partnerships – Chapter 8**

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| Internal  activities | 🡺 | Acquisitions | 🡺 | Arm’s-length  transactions | 🡺 | Strategic  alliances |
|  |  |  |  |  |  |  |
| Make In-house | | | **🡨🡪** | Outsource | | |

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| Strategic Alliances: An integration of companies that shares risk & rewards, information & knowledge, capabilities & expertise, goals & growth. |
| Benefits: Products, Markets, Operations, Technology, Growth, Organizational Skills, Financial strength. |
| Risks: Jeopardizing differentiating core strengths in the market arena, trade-off between short-term and long-term advantages, drain of expertise due to uneven abilities, changing company emphasis. |
| Consider three alliances and partnerships: **3PL, RSP, DI** |

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| **Alliances & Partnerships** |
| **Third-party Logistics (3PL)**  *Relationship with external partners to the supply chain.* |
| **Retailer-Supplier Partnerships (RSP)**  *Relationship between upstream and downstream partners in the supply chain.* |
| **Distributor Integration (DI)**  *Relationship between partners at the same level in the supply chain.* |

**Third-party Logistics (3PL)**

*Relationship with external partners to the supply chain.*

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| ***Logistic Supplier Relationship*** | 🡪  🡪 | ***3PL Alliance*** |
| Transaction-based | Long term |
| Single-function specific | System specific |

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|  |  |  |  | Step 1.  Identify drivers | |  |  |  |  |
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|  | Step 2.  Determine alternative | |  |  |  |  | Step 3.  Determine scope | |  |
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|  |  |  |  | Step 4.  Select partner | |  |  |  |  |
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|  |  |  |  | Step 5.  Implement | |  |  |  |  |
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| Step 1. Identify drivers and need for 3PL.  Balance focusing on core competencies with loss of control. |
| Step 2. Determine alternative 3PL applications.  Where is the most appropriate areas to use 3PL? (B2C,B2B, etc.) |
| Step 3. Determine scope of 3PL relationship.  How much control will be given away?  What will be the amount of authority and responsibility to the 3PL partner? |
| Step 4. Select partner.  Evaluate the adaptability, reliability, and flexibility of potential partners.  Examine the specialization and competency of potential partners.  Conduct evaluation, negotiation, and selection processes. |
| Step 5. Implement.  Initiate the alliance with care. Follow project management knowledge areas:  Scope, Team, Communications, Change Management, Technical Approach.  Only launch alliance after extensive planning and verification of scope and plan. |

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| **DISCUSSION:**  1. What are benefits? (e.g., core competencies, cost, efficiency, etc. )  2. What are risks? (e.g., control, branding, intellectual property, etc. )  3. What are potential critical implementation issues?  (e.g., IT, PM, company cultures, etc. ). |

**Retailer-Supplier Partnerships (RSP)**

*Relationship between upstream and downstream partners in the supply chain.*

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| Supplier |  | Retailer |
| VMI | 🡨 EDI 🡨 | POS |

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| **RSP** | **Ownership of Inventory** | **Inventory Policy Decisions** |  | **Results** |
| Quick Response | Retailer | Retailer |  | Decrease Lead Time |
| Continuous Replenishment | Shared | Shared |  | Reduce Bullwhip Effect |
| Vendor Managed Inventory | Supplier | Supplier |  | Increase Inventory Turnover |

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| **Requirements** |
| * Top Management Commitment |
| * Trust & Confidentiality |
| * Communication & Cooperation |

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| **DISCUSSION:**  1. What are important infrastructures to support RSP?  (e.g., POS, EDI, inventory skills, etc. )  2. How does forecasting skills, inventory control expertise, and logistic capability vary between the three RSPs?  3. Where in the supply chain could each be found? (e.g., supplier, customer, etc. ) |

**Distributor Integration (DI)**

*Relationship between partners at the same level in the supply chain.*

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|  |  |  |  | Distributor |  |  |  |  |
|  | Manufacturer | **↔** | **↕** | *Inventory*  *Services*  *Information*  *Expertise* | **↕** | **↔** | Customer |  |
|  |  |  |  | Distributor |  |  |  |  |
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| Features:   * Inventory. Provide perception of expanded inventory to satisfy customer needs. * Services. Rely on technical ability of other distributors to expand expertise to customers. * Information. Increase forecast accuracy. Share customer satisfaction and needs of products and service. * Expertise. New product introduction. Education and training. |
| Risks:   * + Not adequate rewards, benefits, and recognition systems to all parties.   + Does not allow technical growth of perceived weaker partners.   + Imbalance of cooperation within system. |

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| **DISCUSSION:**  1. What are major drivers for the consideration and implementation of DIs?  2. What challenges should be considered between DI partners in considering rewards, inequities, compensation, shared objectives, etc.?  3. What types of DIs could exist within a supply chain?  4. How can implementation, management, and governance of DIs address short-term and long-term risks?  5. What short-term and long-term challenges arise with ‘centers of excellence’ strategies within DIs? |

***Outsourcing & e-Markets – Chapter 9***

**Outsourcing**

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| ***Procurement of Material***  ***Outsourcing of Functions*** | |
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| ***Advantages*** | ***Disadvantages*** |
| **\*Lower Cost**  **\*Increased Flexibility**  **\*Lower Risks** | **\*Loss of Control**  **(Design, Quality, Production)**  **\*Increased Coordination**  **(Policy, Process, People)**  **\*Loss of Brand Identification** |
| **Also** | **Also** |
| Economies of scale  Risk pooling  Reduce capital investment  Focus on core competency | Loss of competitive knowledge  Conflicting objectives |

**Outsourcing Considerations of Products and Components**

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| **Outsourcing Products** |
| |  | | --- | | Drivers to Outsource (*Fine & Whitney*) | | \*Limited capacity  \*Limited knowledge/ability | | Product Types (*Ulrich & Swaminathan*) | | \*Modular: Functionality based on the individual ‘modules.’  \*Integral: Functionality based on the ‘integration’ of the modules. |   . . . |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | ***Outsourcing Considerations*** | | | |  | |  |  |  | ***Drivers*** | |  | |  |  |  | **Capacity** | **Knowledge** |  | |  | ***Product*** | **Modular** | *Low Risk* | *Medium Risk* |  | |  | **Integral** | *Medium Risk* | *High Risk* |  | |  |  |  |  |  |  |   . . . |

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|  | **Outsourcing Components** | | | | | |  |  |
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|  | *Component Criteria* | Outsourcing Strategies (*Fine*) | | | | |  |  |
|  | **Importance to Customer** | High | Low | High | High | |  |  |
|  | **Component Clockspeed** | Fast | Slow | Fast | Slow | |  |  |
|  | **Competitive Position** | High | Low | Weak | Weak | |  |  |
|  | **Capable Suppliers** | 🡪 | 🡪 | Yes | Yes | |  |  |
|  | **Architecture**  **(Modular,Integral)** | X | Modular | Integral |  |  |
|  | **Outsource?** | No | Yes | No🡪One | Yes🡪No | No🡪Yes |  |  |
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**Considerations of a Procurement Strategy – Kraljic (Supply side)**

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| **Kraljic (Supply side)** | **Fisher (Demand side)** |
| |  | | --- | | **Procurement Supply Strategies** | | Factors in Procurement of Material (*Kraljic*).  \*Profit Impact.  \*Supply Risk. |   . . . | |  | | --- | | **Supplier Footprint** | | Two Types of Products (*Fisher*).  \*Functional Product.  \*Innovative Product.. |   . . . |

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| **Kraljic (Supply side)**  . . . |
| |  | | --- | | **Procurement Supply Strategies** | | Factors in Procurement of Material (*Kraljic*).  \*Profit Impact. Monetary influence on cost, revenue, and growth.  \*Supply Risk. Logistical influence on supply, availability, and service. |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | ***Kraljic’s Supply Matrix*** | | | |  | |  |  |  | ***Profit Impact*** | |  | |  |  | Low | High |  | |  | ***Supply Risk*** | High | **Bottleneck Items**  *(Long-term Contracts)* | **Strategic Items**  *(Top Management Focus)* |  | |  | Low | **Non-Critical Items**  *(Spot Purchase)* | **Leverage Items**  *(Supply Contracts)* |  | |  |  |  |  |  |  |   . . . |

**Considerations of a Procurement Strategy – Fisher (Demand side)**

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| **Kraljic (Supply side)** | **Fisher (Demand side)** |
| |  | | --- | | **Procurement Supply Strategies** | | Factors in Procurement of Material (*Kraljic*).  \*Profit Impact.  \*Supply Risk. |   . . . | |  | | --- | | **Supplier Footprint** | | Two Types of Products (*Fisher*).  \*Functional Product.  \*Innovative Product.. |   . . . |

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| **Fisher (Demand side)**  . . . |
| |  | | --- | | **Supplier Footprint** | | Two Types of Products (*Fisher*).  \*Functional Product. Slow clockspeed, low demand variability and low profit margins.  \*Innovative Product. Fast clockspeed, high demand variability and high profit margins. |  |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **Fisher’s Product Framework** | | |  | |  | *Criteria* | **Functional Product** | **Innovative Product** |  | |  | **Product Clockspeed** | Slow | Fast |  | |  | **Predictable Product Demand** | High | Low |  | |  | **Product Profit Margins,**  **Product Variety,**  **Forecast Error,**  **Stockout Rate** | Low | High |  | |  |  | PUSH | PULL |  | |  | **Strategy** | >Cost< | >Service< |  | |  |  | Offshoring | Onshoring |  | |  |  |  |  |  |   . . . |

**Considerations of a Procurement Strategy – Components**

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|  | **Kraljic (Supply side)** | | | |  |
|  | ***Kraljic’s Supply Matrix*** | | | |  |
|  |  |  | ***Profit Impact*** | |  |
|  |  | Low | High |  |
|  | ***Supply Risk*** | High | **Bottleneck Items**  *(Long-term Contracts)* | **Strategic Items**  *(Top Management Focus)* |  |
|  | Low | **Non-Critical Items**  *(Spot Purchase)* | **Leverage Items**  *(Supply Contracts)* |  |
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|  |  | **Procurement of Components based on**  **Kraljic (Supply side) & Fisher (Demand side)** |  |  |  |
| **↑** | *Kraljic* | **Component Supply Risk** | Low | High |  |
| **↑** | *Kraljic* | **Component Financial Impact** | High | High |  |
|  |  |  |  |  |  |
| **↓** | *Fisher* | **Component Forecast Accuracy** | High | Low |  |
| **↓** | *Fisher* | **Component Clockspeed** | Slow | Fast |  |
|  |  | **Strategy** | Cost  Offshoring | Service  Lead Time |  |
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|  | **Fisher (Demand side)** | | |  |
|  | **Fisher’s Product Framework** | | |  |
|  | *Criteria* | **Functional Product** | **Innovative Product** |  |
|  | **Product Clockspeed** | Slow | Fast |  |
|  | **Predictable Product Demand** | High | Low |  |
|  | **Product Profit Margins,**  **Product Variety,**  **Forecast Error,**  **Stockout Rate** | Low | High |  |
|  |  | PUSH | PULL |  |
|  | **Strategy** | >Cost< | >Service< |  |
|  |  | Offshoring | Onshoring |  |
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**e-Markets**

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| ***e-Markets*** | ***Description*** |
| Public. | A supplier driven horizontal market design that is competition based. |
| Consortium. | A buyer driven vertical market design with supplier collaboration that is focused primarily on administration efficiency. |
| Content. | Either a supplier driven horizontal market design with buyer collaboration with a focus on supplying MRO material or a buyer driven vertical market design with supplier collaboration with a focus on supplying industry-specific material. |
| Private. | A buyer driven vertical market design that is focused on control between the supplier and buyer. |

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| **Supplier links through e-markets in business-to-business** | | |
| ***Characteristics*** | **🡪** | ***Drivers*** |
| Increased Competition | 🡪 | Lowering Cost |
| Increased Flexibility | 🡪 | Enhance Bidding Capabilities |
| Increased Knowledge | 🡪 | Increased Standardization |
| Increased Value | 🡪 | Supports Strategic Alliances |

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| Monetization.  \*Transaction Fee. Percentage of sale paid by supplier, buyer, or both.  \*Licensing Fee. Vendor licensing capability to access network.  \*Subscription Fee. Market charges membership fee to use the system. |

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| **e-Markets** | **Public** | **Consortium** | **Content** | **Content** | **Private** |
| **Basis** | Competition-based | Administrative  Efficiency | MRO | Industry-specific  Material | Collaboration-based |
| **Benefits** | Services,  Price, Quality | Standardization  of Services | Standardization of Material | Standardization of Material | Control |
| **Orientation** | Supplier  driven | Buyer driven  With Suppliers Collaborated | Supplier driven  With Buyers Collaborated | Buyer driven  With Suppliers Collaborated | Buyer  driven |
| **Market** | Horizontal | Vertical | Horizontal | Vertical | Vertical |