***Supply Chain Management – Commodity Supply Chain***

Fall 2020

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| What is a Commodity? |
| What are types of investment commodities? |
| What is a commodity supply chain? |
| What are industry initiatives within a commodity supply chain? |

🡨 Flow of Information 🡨

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

🡪 Flow of Material 🡪

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| ***Supply Chain Industry*** | | | | | | |  |
|  |  | *Supply Chain Characteristics* | | | | |  |
|  |  | Lean  (Cost,Waste) | Green  (TBL,CSR) | Resilient  (Risk) | Responsive  (Agile) | Smart  (Technology) |  |
| *Supply Chain Types* | Commodity  Supply Chain |  |  |  |  |  |  |
| Global  Supply Chain |  |  |  |  |  |  |
| Service  Supply Chain |  |  |  |  |  |  |
| Reverse  Supply Chain |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | *Functions* | Inventory – Logistics – Relationships – Information – Strategy | | | | |  |
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|  | *Drivers* | Analytics – Globalization – Sustainability | | | | |  |
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| **What is a Commodity?** | |
| A raw material or primary good bought and sold. | |
| Interchangeability (Fungibility) | Basic good often used as input to products. |
| Undifferentiation (Price) | Commodity vs. Product (differentiated by value-added) |
| Pure Competition | Commodity vs. Resource (e.g., human rights to water) |

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| **What are types of investment commodities?** | | |
| Tradable or investment commodities: | Examples | |
| Metals | Copper, Gold, Silver, etc. | |
| Energy | Natural gas, Petroleum, Coal, Renewables, etc.  [Industry, Transportation, Residential, Commercial, Electric Power] | |
| Agriculture | Corn, Cotton, Soybean, Wheat, etc. | |
| Livestock & Meat | Cattle, Poultry, Hogs, etc. | |
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| *Foreign currencies, Bandwidth, Mortgages, Staple Products, Services, etc.*  *Water, Health Care, Public Service, etc. (Commodity vs. Natural Resource vs. Human Right)* | | |

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| **What is a Commodity Supply Chain?** | |
| Series of systems  that acquire, produce, and provide commodities to customers. | |
| Characteristics | Interconnected (Systems) |
| Low Cost (Profit) |
| High Service Level (Competition) |

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| **What is Commoditization?** |
| When a basic or primary good becomes  interchangeable,  undifferentiated, and  driven by pure competition. |
| (i.e., Equalizing the contribution between  Price, Availability, Quality, Utility, etc.) |

**What are the characteristics within a commodity supply chain?**

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| *Key Supply Chain…* | | | | | | |
| Commodity Supply Chain. A supply chain that extracts and supplies commodities to satisfy downstream requirements or transforms commodities into other commodities. | | | | | | | |
| Characteristics: Lean, Green, Resilient, Responsive, Smart | | | | | | | |
| Functions in a Supply Chain: Inventory, Logistics, Relationships, Information, Strategy | | | | | | | |
| Stages of a Commodity Supply Chain:  Sourcing [Supplier Relationship Management]  Production [Operations Management]  Storing [Warehouse System Management]  Shipping [Logistics Management]  Demand [Customer Relationship Management] | | | | | | | |
| Types of Investment Commodities: Metals, Energy, Agriculture, Livestock & Meat | | | | | | | |

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| ***Supply Chain Characteristics*** |
| Lean Supply Chain. An efficient supply chain with a focus on reducing cost by eliminating waste throughout the supply chain. | |
| Green Supply Chain. A supply chain with sustainability standards throughout the supply chain based on sustainable strategy, development, and planning. | |
| Resilient Supply Chain. A supply chain that mitigates risks through preparation, responding, and recovering from disruptive supply chain events or threats. | |
| Responsive Supply Chain. An agile supply chain that responds to changes in the marketplace through achieving and maintaining target service levels in a timely manner. | |
| Smart Supply Chain. A supply chain that capitalizes on the use of technology and analytics. | |

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| *Supply Chain Stages* | **Sourcing**  *[Supplier Relationship Management]* |  |  |  |  |  |  |
| **Production**  *[Operations Management]* |  |  |  |  |  |  |
| **Storing**  *[Warehouse System Management]* |  |  |  |  |  |  |
| **Shipping**  *[Logistics Management]* |  |  |  |  |  |  |
| **Demand**  *[Customer Relationship Management]* |  |  |  |  |  |  |
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**Metals (Hard) Commodity Supply Chain**

Copper, Gold, Silver, etc.

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**Energy Commodity Supply Chain**

Natural gas, Petroleum, Coal, Renewables, etc.

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**Agriculture (Soft) Commodity Supply Chain**

Corn, Cotton, Soybean, Wheat, etc.

Livestock & Meat

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