***Supply Chain Management – PUSH-PULL Strategies***

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| **Overview of Key Strategy Topics** |
| Chapters out of Simchi-Levi Text.

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| **PUSH-PULL Strategies** |
| Chapter 6. Supply Chain Integration |
| *Integrating Push-Pull strategies with supply chain design.* |
| \*PUSH-PULL Boundary\*Characteristics\*Relationships\*Indication |

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***PUSH-PULL Strategies***

***Chapter 6***

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|  | ***Push-Pull Boundary*** |  |
| ***Supply chain planning*** | ***🡨 Buffer Inventory 🡪*** | ***Order fulfillment*** |

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| PULL system. Dependent on actual (realized) demand. Dependent on system status.PUSH system. Dependent on forecasted demand. Not dependent on system status.PUSH–PULL Boundary. Position in the supply chain where PUSH and PULL characteristics meet. |
| Factors in implementing a system strategy include demand uncertainty, lead time, economies of scale, complexity of the supply chain structure, focus of the enterprise, and system requirements. |

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| ***Characteristics******of PUSH and PULL strategies.*** |
| *PUSH Strategy* | *Factors* | *PULL Strategy* |
| Low demand uncertainty(forecasted demand) | Demand Uncertainty | High demand uncertainty(realized demand) |
| Long lead times | Lead Time | Short lead times |
| High dependence | Economies of Scale | Low dependence |
| Complex | Supply Chain Structure | Simple |
| Cost(advanced planning) | Focus | Service(order fulfillment) |
| Efficient & lean systems | Systems | Flexible & responsive systems |

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| ***Relationships******of PUSH and PULL strategies.*** |
|  |  |  |  |  |
|  | *Demand Uncertainty* | High | PULL | PullA | InventoryPositioningD |  |
|  | Low | PUSH | ContinuousReplenishmentC | PushB |  |
|  |  |  |  | PULL | PUSH |  |
|  |  |  |  |  |  |  |
|  |  |  |  | Short | Long |  |
|  |  |  |  | *Lead Time* |  |
|  |  |  |  |  |  |
|  |  |  |  | Low  | High |  |
|  |  |  |  | *Economies of Scale* |  |
|  |  |  |  |  |  |  |

Examples

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| A: PCB: Grocery items with long lead times (canned goods)C: Grocery items with short lead times (perishable goods)D: Furniture, automobiles |

***Indication***

***for PUSH–PULL strategy.***

|  |  |  |
| --- | --- | --- |
| PUSH |  | PULL |
| Low demand uncertainty🡪 forecasted demand |  |  |
|  | Upstream PUSH🡨🡪PULL Downstream( Continuous Replenishment )(EDI with POS) |  |
|  |  | Short lead times |
| *Examples: Dell computers, Postponement of Electronics* |

***Indication***

***for PULL–PUSH strategy.***

***(Separable, Nested, Integrated, Strategies)***

|  |  |  |
| --- | --- | --- |
| PULL |  | PUSH |
|  |  | Long lead times |
|  | Upstream PULL🡨🡪PUSH Downstream( Inventory Positioning )🡨Upstream Production Strategy (PULL)(PUSH) Downstream Distribution Strategy🡪(Strategic safety stock) |  |
| High demand uncertainty🡪 realized demand |  |  |
| *Examples: Furniture, Automobiles* |

***PUSH–PULL boundary***

|  |  |  |
| --- | --- | --- |
| PUSH | Boundary | PULL |
|  |  |  |
| Supply chain planning 🡨 | Buffer Inventory | 🡪 Order fulfillment |
|  | *Integration using* |  |
|  | Forecasted Demand |  |

***Summary***

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|  |  |  |  |  |
|  | **Characteristics** | **PUSH** | **PULL** |  |
|  | Objective | Minimize Cost | Maximize Service Level |  |
|  | Supply Chain Complexity | High Complexity | Low Complexity |  |
|  | Focus | Resource Allocation&Supply Chain Planning | Responsiveness&Order Fulfillment |  |
|  | Lead Time | Long | Short |  |
|  | Demand | Low Demand Uncertainty | High Demand Uncertainty |  |
|  |  |  |  |  |