

Managing Supply Chains in Turbulent Times

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Agenda

- The importance of cash
- Reducing the costs of complexity
- Reduce transport intensity
- Focus on total cost of ownership
- Improve customer responsiveness

The role of cash in creating shareholder value

“the value of a company is determined by the discounted value of the cash that can be taken out of the business during its remaining life”

Warren Buffett

The cash-to-cash cycle

How long does it take from when money is spent with suppliers to when it is collected from a customer?

Cash-to-cash = Days of Inventory + Days of Accounts Receivable – Days of Accounts Payable

Supply chain management & shareholder value

Profitable growth

- Perfect orders
- Global excellence
- After-sales services
- New product introductions

Cost minimisation

- Total delivered cost
- Process cost reductions
- Outsourcing
- Shared services

Working capital efficiency

- Cash to cash cycle time
- Days of supply in inventory
- Inventory turns
- Receivables and payables

**Improved
shareholder
value**

Tax minimisation

- Assets and sales locations
- Transfer prices
- Customs
- Fuel and property taxes

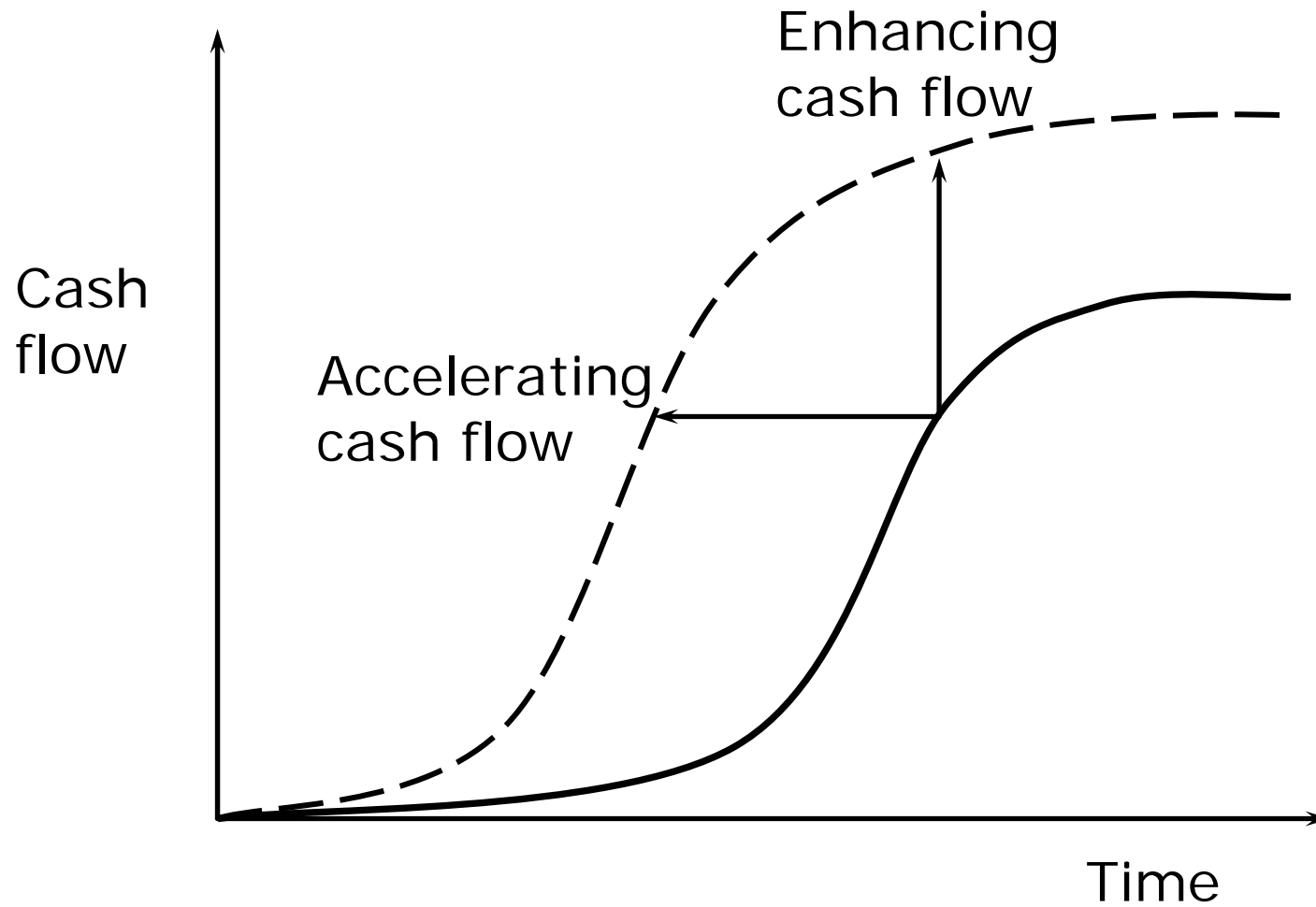
Fixed capital efficiency

- Return on assets
- Network optimisations
- Capacity mgt/throughput
- Outsourcing

After tax free cash flow

$$\begin{aligned} &= \text{Net operating income} \\ &\quad \text{minus} \\ &\quad \text{Taxes} \\ &\quad \text{minus} \\ &\quad \text{Working capital investment} \\ &\quad \text{minus} \\ &\quad \text{Fixed Capital Investment} \end{aligned}$$

Changing the cash flow profile

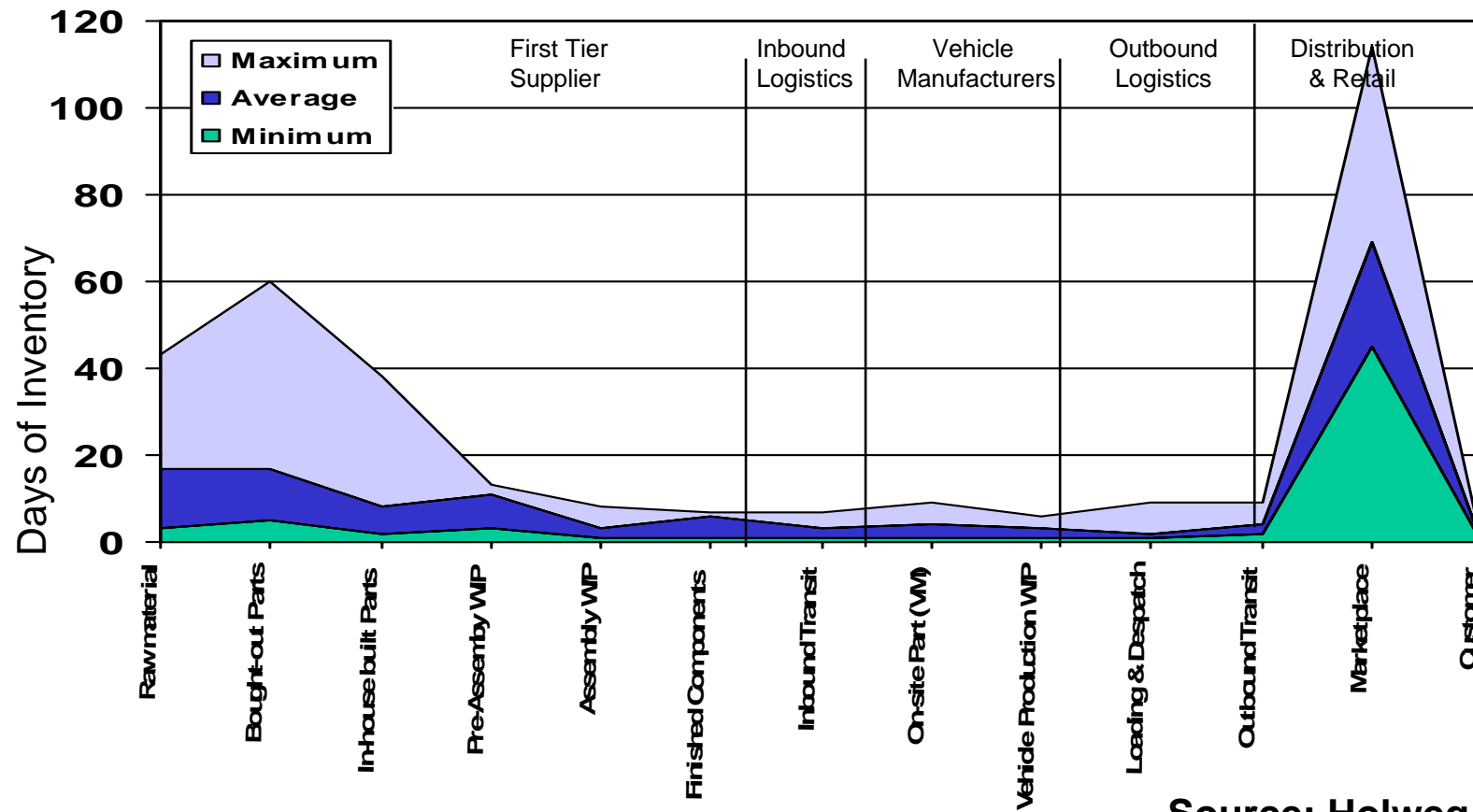


Nothing ever changes

“..... In 50 years between 1870 and 1920 the cost of distributing necessities and luxuries has nearly trebled, while production costs have gone down by one-fifth.... What we are saving in production we are losing in distribution.”

Ralph Borsodi
'The Distribution Age' 1929

Inventory profile of the automotive supply chain



Source: Holweg (2002)

The sources of complexity

- Network complexity e.g. too many nodes and links
- Process complexity e.g. too many steps
- Offer complexity e.g. too wide a range
- Product complexity e.g. too many unique components
- Customer complexity e.g. too many service options
- Supplier complexity e.g. too many suppliers

Reducing the transport intensity of the supply chain

Transport intensity is the per unit transport element in a shipment

- Bring supply closer to demand through more 'local for local' arrangements.
- Greater levels of collaborative working and asset sharing to improve transport utilisation.
- Leverage economies of scale through bigger vehicles and vessels.
- Utilise postponement techniques to enable low cost country sourcing of 'vanilla' products to be moved in bulk for local finishing.
- Explore opportunities for product and pack re-design.



Farmers in Zentsuji, southwest Japan, preparing to pack square watermelons before shipment in refrigeration units. A farmer came up with the idea of optimising transport space and the melons are formed in square glass containers

The challenge of globalisation

Continued trends to off-shore sourcing and focused factories bring reduced costs to purchase/manufacture but

..... have the potential to increase total supply chain costs and to reduce agility.

Global Sourcing : UK Empirical Study

- Global Supply Chains increase the exposure risk of disruption
- Most sourcing decisions are taken on a limited definition of cost
- The impact of global sourcing on the carbon footprint is not factored into the decision
- The true cost of inventory is rarely recognised
- Using total cost models is the exception rather than the rule

*Source : Global Sourcing & Logistics
Cranfield Centre for Logistics & Supply
Chain Management, 2007*

Understanding the total costs of ownership

Not just the purchase price, but

- Increased transport costs
 - Increased inventory financing costs
 - Increased uncertainty of supply
 - Longer lead-times
 - Less visibility and increased likelihood of “bullwhip” effect
 - Loss of control in quality
 - Longer development cycles for new products
 - Increased exposure to security risks
- etc

Improving customer responsiveness

“The opportunities for cost reduction are finite – there are only 100 cents in every dollar. However, the opportunities for enhancing customer value are infinite – we are only limited by our imagination”