Course Review

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James B. Rice, Jr.
Deputy Director
MIT CTL

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SC Management: Driving Strategic Advantage

- **Tuesday:**
  - Halloran Metals Case: Dr. Jonathan Byrnes
  - Beer Game & Debrief: Dr. Roberto Perez-Franco & Jim Rice
  - Reception at Champions (Marriott)
- **Wednesday:**
  - Intro to SC Financial Accounting and Analysis: Jim Rice
  - Dakota Office Products Case: Jim Rice
  - Working Capital & Cash-to-Cash Cycle: Dr. Jarrod Goentzel
  - Interview with Yannis Skoufalos, P&G CSO
  - Working Capital Simulation: Jarrod Goentzel
  - ResearchExpo
- **Thursday**
  - Zara Fast Fashion Case: Jim Rice
  - Global Supply Chain Business Case Simulation: Jarrod Goentzel
  - Supply Chain Risk Management: Jim Rice
  - SCREAM Resilience Exercise: Dr. Chris Caplice
  - Reducing Risk and Sourcing Sustainability: Dr. Alexis Bateman
- **Friday**
  - The Power of Resilience: Prof. Yossi Sheffi
  - SC2020: Rethinking Your SC Strategy: Roberto Perez-Franco
Halloran Metals Case

- Does Halloran have a strategy?
- Is it a good strategy?
- Allied & Halloran
  - Distinct strategies, competing in different ways – both can be successful
- Strategy
  - Deciding what you WON'T do!
- Alignment is critical
  - The supply chain must serve the business strategy

The Beer Game

- Playing the Game
  - Mayhem, limited data, uncertainty – similar to the real world
  - The winner(s) – The Keg......OR Good Looking Team?
- Debrief
  - Tendency to respond to events
    - Events → manifestations of patterns
  - The possibilities: 10X improvement!
  - Key patterns found in SCs
    - Oscillation, Amplification, Phase Lag – the BULLWHIP EFFECT
  - Events → Patterns → Structure
    - Leverage at structure level
SC Financial Analysis

- Income Statement cf. Balance Sheet
- Activity-Base Cost (ABC)
- Cash-to-cash Conversion Cycle

Yannis Skoufalos Interview

- China market and dynamics
- Environmental Sustainability – not an NPV calculation, must be part of value offering
- From many DCs → few Mixing Centers
- Trending towards regional supply chains
- → E2E SC synchronization
- Relationships with government, customers
- 3 stakeholders: consumers, trade, employees
- Financial analysis of supply chains
  - Sales Growth
  - Margin Increase
  - Asset Efficiency
- Advice to students: pursue knowledge!
SC Working Capital Simulation

- Sun Nutraceuticals:
  - Distributor with high turnover, thin margins, breaking even, high receivables, flat growth....
  - Considering investment options
  - WACC vs Cost to borrow
  - Cash constrained
  - Balancing Margin – Revenue Growth – Asset Utilization

Zara: Fast Fashion

- Zara business system
  - Challenged the traditional, dominant SC design to disrupt the industry
    - From far-market, high labor content, low capital outsourced → near-market, low-labor, high capital vertically integrated SCs
  - Integrated system, postponement, JIT, automation/selective labor use, daily demand sensing, short production runs, low risk testing new designs → Fast Fashion!
  - Can a regional SC serve a global marketplace?
Global Supply Chain Simulation

- Design, marketing, procurement, balance supply & demand, profitability, board interests
- Key takeaways: **Accurate forecasts**
  - Gather more data, esp individual forecasts
  - Capture std deviation of individual forecasts
  - Small amt of actual demand \(\rightarrow\) improve forecasts
- **Key Takeaway: Responsive supply**
  - Consider products to produce with speculative/reactive capacity
  - Shorten lead times, boost reactive capacity
- **Key Takeaway: Optimize inventory***
  - Use standard deviation to ID how much to over/underproduce
  - Consider Critical Ratio (based on the cost of being under/over) for intuition

* These relate to newsvendor problem. Contact Jarrod for more details and application ...

Winners!

SCRM & Resilience

- Low probability/high impact disruptions
- 4 SCRM Framework
  - Vulnerability Assessment
  - Monitoring & Measurement
  - Crisis Mgt and Emergency Response
  - Mitigation and Implementation
- Failure mode focus
- Flexibility & Redundancy
  - Many paths to flexible SC
SCREAM

- Not all Sunny days …choosing one policy for multiple scenarios
- Multiple ways to protect – at different costs
  - Different policies do well under different scenarios
  - Understanding the right scenario portfolio is key
- Downstream matters more than Upstream
  - Protecting the DC is more important than protecting the plant or the supplier
- Combination of Robustness & Flexibility
  - Typically most reasonable approach is mixed
  - Robustness to cover the Response Time for Backups
  - Flexibility (backups) relied on for longer term

Reducing Risk and Sourcing Sustainability: The Path to Supply Chain Transparency

- Social, Environment, Economy
- Supplier transparency & standards
- Palm Oil Supply Chain
- Transparency & Traceability
- External Partnerships and Industry Collaboration
The Power of Resilience

• Two ways to look at disruptions: sources and outcomes
  • Detectability
  • Alert applications
  • Two cases: P&G and GM
• Resilience through redundancy and flexibility
  • Flexibility DNA

SC2020: Rethinking Your SC Strategy

• Lamynix and Zara cases
• We’re biased toward gradual improvement, hard to imagine huge change
  • Revisit your latent assumptions about the future
  • Develop strategies for success for each future
  • Use scenario planning and risk management to prepare your supply chain for the future
• Four scenario possibilities
  • Millions of Markets, Naftastique!, One World Order, Global Marketplace
• Align SC strategy to support corporate strategy
SCM: Driving Strategic Advantage

Today you leave MIT with:
• a tool set of frameworks and methods for thinking differently about designing and running your supply chain/supply network,
• many illustrations of these methods with examples of the great potential
• a new network of colleagues

How will you apply these learnings?

Thank you....

• ...For investing your time,
• ...For engaging so deeply,
• ...and for helping us with two final requests
Two parting requests....

• Give us your feedback
  • This helps us improve our program
  • 3-4 minute survey at
  • https://www.surveymonkey.com/r/FVY2MWL

• Tell others and.....
• Send a colleague to our next course
  • If you’ve had a good experience, tell a colleague and send him/her to a future CTL exec ed program