Supply Chains & Economic Development

1. **Supply Chain Reengineering in Agri-Business – A Case study of ITC’s e-Choupal**
   - Based on my work with ITC’s Agri Business Division

2. **ITC’s e-Choupal: A Platform Strategy for Rural Transformation**

3. **Creating mutual value: Lessons learned from ventures serving base of the pyramid producers**, *Journal of Business Research*, Volume 63, No. 6, June 2010
   - We develop a framework for enterprises to understand the constraints faced by the BoP producer and outline strategies to alleviate these constraints to create mutual value.

   - Report of a USAID sponsored research project on a comparative assessment of donor-led and enterprise-led value chain initiatives.
   - Based on the above work the following paper was published. **Using the base-of-the-pyramid perspective to catalyze interdependence-based collaborations**, *Proceedings of the National Academy of Sciences*; July 31, 2012, vol. 109, no. 31, 12338–12343

Innovations in Global Healthcare Delivery

   - A book chapter manuscript based on field study of several initiatives of deployment of telemedicine systems in India across tertiary and primary care.

   - The case describes Abt Associates’ innovative decentralized community-based approach to Indoor Residual Spraying in Uganda that delivers better efficiency (50% lower than prevailing approaches) and higher effectiveness.

   - The case describes a private sector approach to developing a comprehensive healthcare service delivery network to serve rural India. Students learn about the challenges of designing a healthcare delivery network in resource constrained settings, role of community health workers and leveraging technology.

Comprising over 20% of world’s burden, tuberculosis (TB) is a ticking time-bomb for India. The case describes the challenges of TB treatment in India highlighting that the disease is not simply a medical problem but a social and behavioral one as well. The focus of the case is the story of Operation ASHA, an NGO based on N. Delhi. Operation ASHA provides a community-based patient-centric last-mile service delivery system focused on providing a complete solution for TB detection and treatment. It has deployed a bio-metric based eCompliance technology and leverages the public sector infrastructure for diagnosis and delivery, achieving high efficiency (per patient service delivery cost at one-tenth that of existing approaches) and high effectiveness (with 97% treatment compliance). Students are asked to offer suggestions on how Operation ASHA could move towards financial sustainability.

- The case motivated the following OpEd piece published by the Lancet on March 24, 2014 (World TB Day) titled Tuberculosis control needs a complete and patient-centric solution.

9. Moving Up in the World: An article articulating the business opportunity for medical device industry in emerging markets (targeted to practitioner audience).

10. A Study of GVK EMRI’s Rajasthan Emergency Operations (Executive Summary), May 28, 2018. This report is a based on Michigan Ross MAP engagement where in a team of four MBA students study the performance of emergency response operations in the State of Rajasthan (India) and make recommendations for improvement.

11. Unintended consequences and hidden obstacles in medicine access in Sub-Saharan Africa (submitted for publication); with Dr. Iain Barton (Imperial Logistics), Anton L.V. Avanceña (University of Michigan), and Nevashni Gounden (Imperial Health Sciences).

**Sustainability Operations & Supply Chains**


In 2008 access to recycling of poly-coated beverage cartons in the US was stuck at about 18%. Without better recycling access, the industry was at risk of losing market share to other packaging. Alan Murray, then CEO of Tetra Pak North America, rallied the industry together under the umbrella of the Carton Council of North America (CCNA), to focus on improving recycling access to communities across the US. The case describes the reverse supply chain for recycling of cartons, reasons for poor recycling access, and initiatives taken by the CCNA to rebuild the reverse supply chain. CCNA’s initiative came to be known as Voluntary Producer Responsibility (VPR). Four years after the launch of the program, by 2013 recycling access had improved to 40%.

The case exposes students to the structure and challenges of the recycling industry in the United States. It showcases joint industry action to bring about change in status-quo. It highlights the importance of (re)design of a reverse supply chain for improved access to recycling that works on
market principles. Such reverse supply chain designs for recycling necessarily involves multiple stakeholders and entails an approach that involves same-sector, inter-sector, and public-private partnerships. Students are able to understand the distinct roles building Infrastructure (supply chain design), increasing supply (supply push), and increasing demand (market pull). They also have an opportunity to reflect on the role of regulation in improving recycling rates.

- Voluntary Producer Responsibility Teaching Note

- (Video) Interview with Alan Murray, CEO of NextFoods (former CEO of Tetrapak, US & Canada), Center for Positive Organizations, Ross School of Business at the University of Michigan. The first part of the interview is relevant to the case; the second part is a discussion regarding NextFoods.


Abstract: The case focuses on Dell’s efforts to develop an open-source scalable, and cost-effective supply chain capable of delivering ocean plastics waste to its production facilities, and potentially to those of partnering companies through a consortium. Case protagonist Piyush Bhargava’s primary challenges are threefold: 1. To deliver “additionality” by making sure that the combination of efforts would make a difference for ocean health and the involved communities; 2. To devise a strategy for operationalizing an ocean plastics supply chain at scale by considering alternative uses for ocean plastics; 3. To determine how Dell should approach developing a consortium of companies to ensure meaningful demand for the material.

The case presents scientific information on the causes, scale, and impact of the ocean plastics problem. It provides background on Dell’s involvement in other sustainable packaging initiatives and gives insight into both why Dell chose this cause and how it came to be a leading initiative within the company. Risks, costs, and other operational details are provided to give students an opportunity to dive into the operational aspects of the supply chain. The case concludes with three key inflection points: delivering additionality, scaling internally within Dell, and scaling externally through a consortium.


This case highlights opportunities and economic, environmental, and social value generated by one of the nation’s largest college dining operations, the University of Michigan’s MDining, through implementing local and sustainable food sourcing initiatives. The case study describes the MDining leadership team and its holistic approach to sustainability, the challenges of implementing an aspirational local sourcing program, and encourages students to discuss potential solutions. The case covers the important role a university can play in improving food sustainability on campus, especially through student clubs, projects, and employment and research opportunities. More broadly, the case highlights challenges that large institutions can face in implementing local sourcing. The case allows for a discussion on the nuances between local and sustainable food and what role institutions can play in ensuring sustainable food services procurement.
The case describes deliberations of the University of Michigan’s Presidential Advisory Committee on Labor Standards and Human Rights (PACLSHR)1 on the issue of the responsibility of a licensee, adidas, towards unpaid severances at one of the Indonesian factories, PtKizone, that produced university apparel that closed down. There is pressure from student activist groups to terminate the contract with adidas. What should PACLSHR do? The case offers the opportunity for the students to understand the complexity of managing social issues in global supply chains.

Supply Chain Risk Management


Abstract: The case describes the redesign of a procurement system for fasteners used at Boeing. Non-availability of components like fasteners had become a considerable risk for Boeing. Aircraft production at Boeing was being delayed in part due to non-availability of fasteners throughout the supply chain, but particularly with their Tier-1 and Tier-2 partners. The situation highlights how a seemingly inconsequential item within a company’s bill of materials, if not managed appropriately, could bring down an entire supply chain. Boeing was attempting to do a complete overhaul of how it and its partners procured fasteners. Boeing’s initiative is an interesting example of how a large company could design and implement a sourcing strategy for a low-value yet critical part.


Describes in detail Cisco’s approach to supply chain risk management and outlines a scenario of how to address the H1N1 outbreak.

- Video Interview with case protagonists


Gives a description of the 2011 tsunami impacts for Cisco and preliminary actions taken (until day 3). I then break up the class into small groups to brainstorm and give recommendations on five issues that the protagonist needs to wrestle with. Students report out and then I summarize what Cisco did. Depending on time available, one could play a 30-40 minute video interview (link provided below) that I did with the protagonist on what Cisco actually did (full transcript of video along with supporting slides is also available).

- Interview with case protagonist, James Steele (video; WARNING – very large file)

1 I was a member of the PACLSHR committee when this issue was being debated. I now Chair this committee.

Summarizes our research that shows level of sub-tier supplier sharing in the hitech industry and demonstrates the significant impact of such sharing on OEMs financial performance through propagation of volatility.