



Sharpen your tools in
managing the supply chain

What's in
your
Toolbox?
MSc level
Education
perspective

- **MSc Global Supply Chain Management (PolyU) – 2.5 Years**
- LGT5002 International Logistics Systems, Operations and Management
- LGT5015 Supply Chain Management
- LGT5034 Global Sourcing and Supply
- LGT5105 Managing Operations Systems
- LGT5109 International Operations Management
- LGT5046 Contract Management
- LGT5083 Digital Procurement Management and Analytics
- LGT5152 Information Systems for Supply Chain Management
- MM544 E-Commerce
- LGT5215 Practice of Global Supply Chain Management

What's in
your
Toolbox?
**BBA level
Education
perspective**

- **BBA Global Marketing and Supply Chain Management (HKMU) – 4 Years**
- BUS B200F Integrated Business Foundation
- BUS B220F Integrated Business Functions
- BIA B350F Applied Multivariate Analysis for Business
- FIN B281F Finance for Managers
- MKT B365F Services Marketing
- SCM B372F Operations Management: Concepts and Applications
- BUS B368F Business Issues and Ethics
- MGT B398F Business Strategy
- SCM B371F Logistics
- SCM B373F Operations Management: Tools, Models and Analytical Approaches
- BUS B328F Investigating Entrepreneurial Opportunities
- BIA B358F Electronic Business Management
- IB B461F International Marketing
- SCM B471F Supply Chain Management I
- SCM B472F Supply Chain Management II
- BIA B452F Business Intelligence and Big Data Analytics
- MKT B462F Strategic Marketing

What's in your Toolbox? Professional perspective

- CPSM® (3rd Edition) emphasizes the major competencies:
- Sourcing
- Category Management
- Negotiation
- Legal and Contractual
- Supplier Relationship Management
- Cost and Price Management
- Financial Analysis
- Supply Chain Strategy
- Sales and Operations Planning
- Quality Management
- Logistics and Material Management
- Project Management
- Leadership and Business Acumen
- Systems Capability and Technology
- Risk and Compliance
- Corporate Social Responsibility



What's in your Toolbox? Professional perspective - evolution!

CPSM® (3rd Edition) vs 2nd Edition:

- 1-A-1 Assess **stakeholder needs** and organize into sourcing plans
- 1-A-2 Analyze and advise on feasibility of internal customer requests
- 1-A-4 Determine methods to process requirements for goods or services based on cost, timing, existing contracts and competitive bidding, as appropriate
- 1-B-1 Create a category management plan to meet the organization's key objectives
- 1-B-2 Execute a category management plan
- 1-C-1 Prepare negotiation plan that aligns with organizational objectives
- 1-D-2 Award contracts to suppliers
- 1-D-5 Generate and follow supply management processes to ensure legal compliance
- 1-E-4 Conduct regular business reviews with suppliers
- 1-E-6 Identify opportunities to drive supplier innovation
- 1-E-9 Resolve invoice and payment problems
- 1-E-10 Act as a liaison between suppliers and functional areas to ensure accurate information, documentation and product flow
- 1-E-11 Work with suppliers to identify constraints and implement value-added processes
- 1-F-4 Track and validate cost reduction and cost avoidance


What's in
your
Toolbox?
Professional
perspective
- evolution!

- CPSM® (3rd Edition) vs 2nd Edition:
- 2-A-4 Structure the supply chain in support of the organization's business strategy
- 2-B-1 Incorporate the use of sales, inventory and capacity forecasts in the planning of materials production to better meet strategic objectives and goals
- 2-B-2 Conduct demand planning
- 2-F-4 Analyze supplier transportation costs
- 2-F-6 Conduct network design and optimization to support the business model, increase productivity and lower operating costs
- 2-F-7 Oversee the day-to-day operations of a warehousing function
- 2-F-10 Expedite/de-expedite orders
- 2-F-11 Develop and/or execute plans and metrics to reduce risk of shortages
- 2-F-12 Identify cost-effective packaging that meets requirements

What's in your Toolbox? Professional perspective - evolution!

CPSM® (3rd Edition) vs 2nd Edition:

- 3-A-2 Participate in organization-wide budgeting
- 3-D-1 Incorporate the use of technology-driven processes to analyze data and make more informed business decisions
- 3-D-2 Conduct ongoing research of the market, current competition, company imperatives, recent trends and emerging capabilities that will provide competitive advantage
- 3-E-3 Implement a claims management program
- 3-E-8 Assess, manage and monitor the risk of doing business with third parties and their subcontractors
- 3-E-9 Investigate and/or verify fraudulent or non-compliant employee purchases
- 3-F-5 Establish and monitor social responsibility programs including corporate citizenship and community outreach



Latest Lesson: COVID-19 pandemic

- The pandemic triggered severe social and economic disruption around the world, including the largest global recession since the Great Depression.
- Widespread supply shortages, including food shortages, were caused by supply chain disruption.
- The resultant near-global lockdowns saw an unprecedented pollution decrease.
- Educational institutions and public areas were partially or fully closed in many jurisdictions, and many events were cancelled or postponed.
- Misinformation circulated through social media and mass media, and political tensions intensified.
- The pandemic raised issues of racial and geographic discrimination, health equity, and the balance between public health imperatives and individual rights.

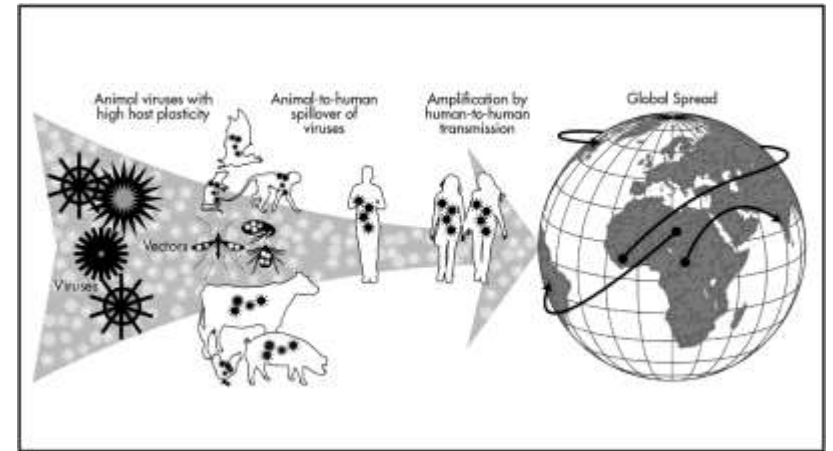


Paradigm shift

- Scope
 - Typical disruption is localized geographically and/or by sector.
 - E.g. 9-11 terrorist attacks, which disrupted various travel industries while farming and retailing pressed on after short pauses
 - During pandemic, the whole world and all industries absorb impacts.

Paradigm shift

- Spillover
 - Typical disruption often unfolds like a rock thrown into a lake—a large initial shock generally dissipates into minor ripples
 - In pandemic: In response, governments adopt a war footing wherein they take steps such as closing borders, urging or dictating pivots to industry, and restricting individuals' freedom of movement.
 - These actions are intended to mitigate effects, but some actually exacerbate the spillover



Spillover Effect

/スピロバー・エフェクト/
(economics) The phenomenon in which an economic event in one context occurs because of something else in a seemingly unrelated context.

Paradigm shift

- Shifts
 - Typical disruption reshuffles the proverbial deck regarding supply and demand—often affecting one, but not the other.
 - E.g. For example, supplier's bankruptcy can result in a temporary loss of supply, but may have little, if any, effect on demand.
 - During pandemic, the force of disruption is strong enough to force supply and demand to extreme highs and lows
 - E.g. Nationwide panic buying of household items and the complete evaporation of even 'toilet paper' (and even flushed demand for industrial-grade versions (i.e., large rolls that fit dispensers)).



www.gaganchumbi.com

Gagan Chumbi

COMPANIES OPTING FOR
**PERMANENT
WORK FROM HOME**

Myntra | Facebook | Infosys

wipro | tcs | Microsoft

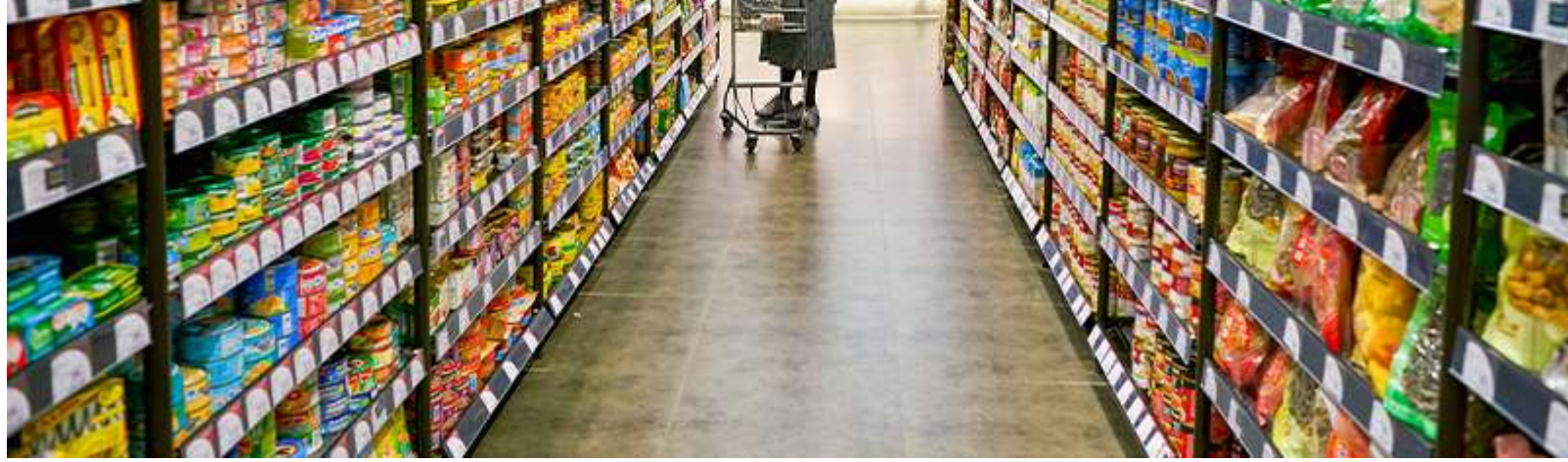
amazon | Google

www.gaganchumbi.com

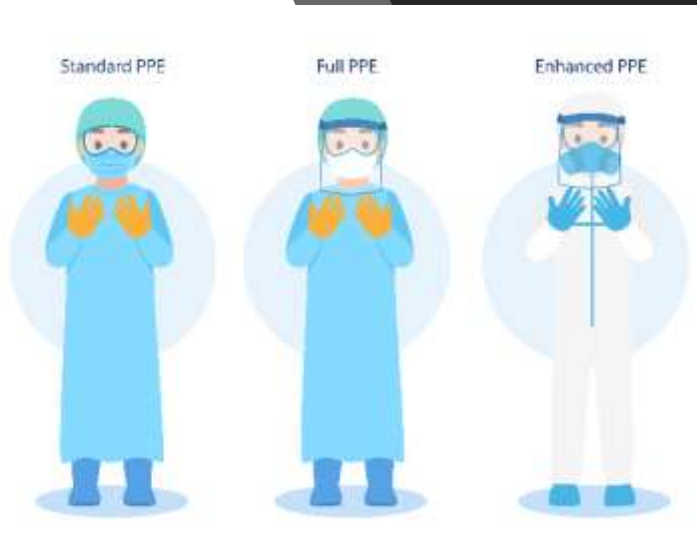
COVID-19 precautions

- For scholars, we outlined a series of theories that we believe are powerful tools for making sense of what happened, how organizations responded, and how supply chain structures and processes can be adjusted in case another pandemic arrives
- “Necessity is the mother of invention.” Organizations experimented with new ideas and approaches





Phenomenon 1



- RDT
- Hospitals' ability to respond to massive increases in demand for treatment was (initially) constrained by limited supplies of personal protective equipment (PPE) and ventilators.
- Abnormal spike in demand, a critical bottleneck may surface
- E.g. spillover effects within a pandemic add complexity to managing these time-induced bottlenecks from resource dependencies
- *Resource dependence theory*: Firms depend on external entities for needed inputs and take actions to reduce this reliance.

Phenomenon 2

- INST
- Consider the power dynamics in a traditional retailer–supplier relationship. Retailers are dependent on suppliers for access to brands and products, and suppliers are dependent on retailers for access to consumers.
- Under normal circumstances, retailers enjoy a power advantage and wield this power to extract concessions from suppliers (Huang, Li, & Mahajan, 2002).
- During pandemic, the balance of power shifts in suppliers' favor.
- In the midst of consumer stockpiling and unprecedented increases in demand, retailers are increasingly dependent on suppliers to keep shelves stocked
- *Institutional theory*: Pressures from the environment lead firms to choose actions that help them gain or maintain legitimacy.



Don't Stockpile Toilet Paper



Phenomenon 3

ROT

Make-or-buy decision is a key consideration here as firms determine how much of their resource portfolio is built in-house versus contracted out to supply chain partners

During a pandemic, firms must not only rethink *how* they can generate value from their current bundling of resources but also *what type* of value they can create.

- E.g. Amazon, for example, simultaneously altered its product mix toward essential items, onboarded tens of thousands of new employees, and abandoned its 2-day delivery capabilities. In other words, the resource bundle that had fueled much of Amazon's previous success was completely reconfigured during the pandemic
- E.g. Louis Vuitton reconfigured its fashion workshops and cosmetics factories to produce much-needed masks, hospital gowns, and hand sanitizer



LOUIS VUITTON TURNS HAND TO MASK PRODUCTION

CORONAVIRUS

Louis Vuitton retrofits French workshops for mask production amid coronavirus pandemic

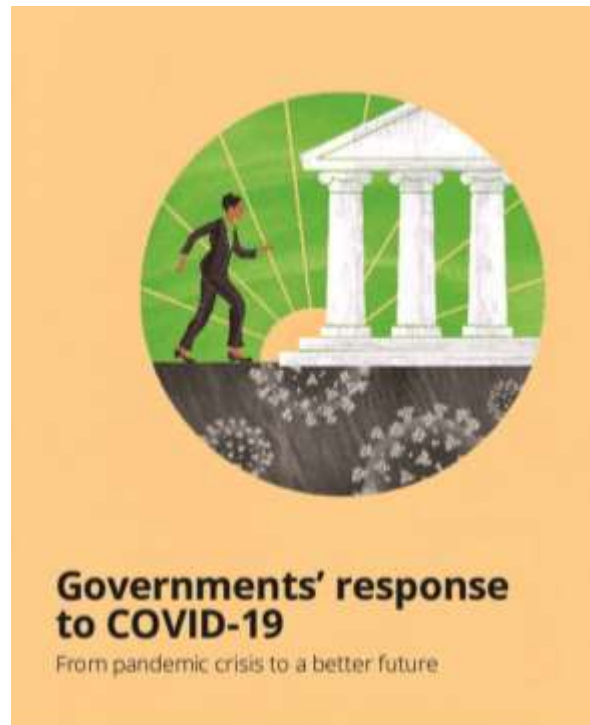


Phenomenon 3

- ROT
- After a pandemic, we expect that firms will restore some of their previous resource deployments, whereas others will be permanently transformed. E.g. Louis Vuitton may review and synchronize how resources are structured, bundled, and leveraged will be crucial to prepare for future pandemics.
- Modeling the balance of make-or-buy decisions that would allow firms to whether the extreme shifts in supply and demand in future pandemics could help managers determine how much of their resource portfolio should be moved back in-house.
- *Resource orchestration theory*: Firms structure, bundle, and leverage strategic resources to
- achieve a sustained competitive advantage and superior performance.
- Reshoring: the practice of transferring a business operation that was moved overseas back to the country from which it was originally relocated



Phenomenon 4



- SIT
- The tendency of organizations to maintain the status quo or to resist deviating from existing structural schemes. It is manifested in structural resistance against fundamental reorganization, assuming that the core features of organizations change slowly due to inertial pressures.
- Within an ecosystem, buyers and suppliers can become deeply intertwined, fostering a high level of interdependence.
- E.g. Government's attempt to help small businesses under the COVID-19 pandemic via a targeted loan program. Larger firms gobbled up much of the initial funding that was intended for small businesses, leaving many of the latter suffering.
- Amazon upped its suggested inventory levels, and Rise Bar began shipping the "lion's share" of its available products to Amazon (Dudley, 2020). Such actions deepened the relationship between Rise Bar and Amazon but gave short shrift to Rise Bar's other retail partners
- *Structural inertia theory*: Groups of firms who cooperate may be more likely to survive a pandemic than uncooperative ones.

Phenomenon 5



- *GT*
- Cooperation between competitors may also be warranted and, in some cases, requested by governments to adequately address a pandemic's impacts.
- During pandemic, for example, large grocery chains paid their suppliers faster to help suppliers stay solvent (Creditsafe, 2020).
- the “shadow of the future” proposition suggests that firms will be more likely to cooperate—or at least not act opportunistically—in order to prevent being “punished” by buyers and suppliers in future pandemics (Bó, 2005).
- *Game theory*: Because firms strive to maximize payoffs, their actions can be predicted based on their interactions with other actors.



Phenomenon 6

- *ROT*
- Real options theory focuses on how to make better decisions within uncertain situations. Managers are believed to manage uncertainty by creating real options for themselves wherein they have the opportunity, but not an obligation, to make a bolder move as uncertainty is resolved.
- During pandemic, many restaurants were forced to convert in-house dining operations to curbside and delivery operations (a switch-use option) because of government restrictions
- As social distancing measure / lock-down were relaxed, restaurants had to decide whether to maintain both types of operations or return to their original approach.
- *Real options theory:*
- Managers delay decision-making under uncertain conditions by creating options, then exercising or not exercising those options.





Phenomenon 7

- *EST*
- A dramatic event may trigger changes to an organization's behaviors & features
- E.g. 9-11 attacks disrupted airport security operations, which prompted changes such as passengers having to remove shoes when going through the screening process
- EST is a natural fit for supply chain research on pandemics
- E.g. "fast fashion" companies were forced to move their design and manufacturing activities online whereby designers used digital prototyping to sample garments, prospective factories used virtual showrooms to showcase capabilities, and buyers placed orders from virtual lookbooks and digital fashion shows.
- E.g. even a Japanese dine-in restaurant turned itself to serve take-away diner
- E.g. work-from-home
- Industry experts referred to COVID-19 as a "catalyst for change" and predicted such digitalization would continue into the future
- *Event system theory*: Novel, disruptive, or critical events are more likely to shape firm behaviors, and their effects may disperse widely across firms.

Phenomenon 8

Awareness



Motivation



Capability



- *AMC*
- A firm might ignore or downplay the potential for a pandemic under a belief that the pandemic's effects would not spill over to its sector.
- Another firm might be consumed by more explicit and immediate threats such as the bankruptcy of an important supplier, labor problems in a factory, untimely executive turnover, or an overseas competitor establishing a foothold in its home market. With so many risks to manage, perhaps a pandemic—a high impact, but low probability event—takes a back seat to more salient ones. Thus, awareness of the threat posed by a pandemic increases the likelihood of a proactive response, but low motivation to respond makes a “wait and see” approach more likely.

Phenomenon 8



Like a patrolman walking his beat, executives must watch out for moves by competitors that can steal sales from their firm.



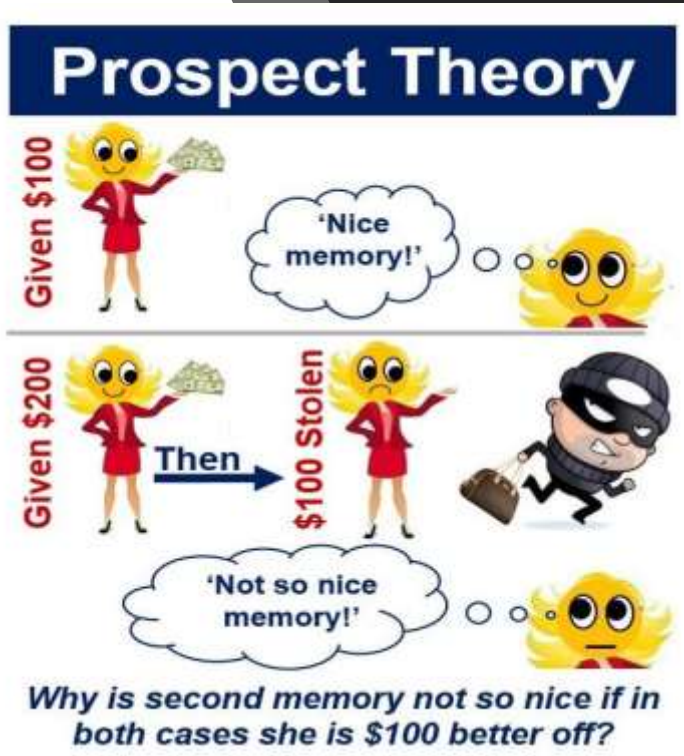
Newton's third law of motion states that for every action there is an equal and opposite reaction. Just like a little kid who cries "He hit me first!" when being admonished for hitting a classmate, executives will be highly motivated to retaliate when a rival makes a competitive move.



Famed literary figure Johann Wolfgang von Goethe once said, "Thinking is easy, acting is difficult." Like a firefighter that puts as many tools at her disposal as possible, firms must possess plans, as well as resources, to respond to the actions of their rivals.

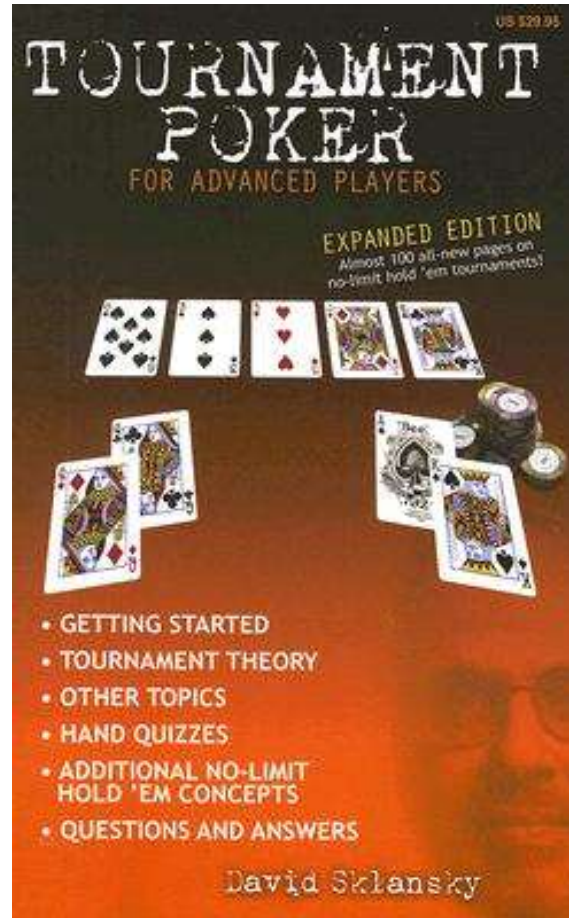
- *AMC*
- *Awareness–Motivation–Capability Framework*
- *To predict the likelihood of attack and of response. Underpinning the prediction are three drivers of competitive behavior: awareness, motivation, and capability*

Phenomenon 9



- *PT*
- During pandemic, supply chain managers' risk-seeking behaviors will not only be magnified but actually encouraged because of the enormity of the potential losses
- During pandemic, media coverage varied significantly across countries and news outlets; some were accused of using “sensationalist” or “inflammatory” frames, whereas others were criticized for downplaying potential risks
- Use of loss frames may be warranted to galvanize managers to take the aggressive actions necessary to combat a pandemic's extreme effects
- Supply chain managers are likely to underreact prior to the pandemic but overreact (e.g., hoarding behaviors) during the pandemic when “losses loom larger than gains”
- *Prospect theory*: The framing of alternatives in terms of potential gains or losses shapes managers' risk preferences and decisions

Phenomenon 10



- *TT*
- During Pandemic, on the supply side, extreme scarcity raises the stakes associated with acquiring needed items. Rather than rationing goods across their customer base
- E.g. Some suppliers provided all available stock to preferred customers and left others empty handed, i.e. the costs associated with losing (i.e., empty shelves and unhappy customers) will incentivize firms to improve their competitiveness in future tournaments
- Firms that were winners will need to figure out how to ensure they remain a preferred customer, whereas losers will need to figure out how to improve their standing
- Some tournaments are winner-take-all as, but others are structured more like a an automobile race wherein the first-place performer takes the proverbial lion's share of the rewards and others win logarithmically descending rewards Vs bowling game

Phenomenon 10



- *TT*
- If the prize spread is too small (i.e., payoffs are distributed too broadly), firms' incentives to excel are low. If the prize spread is too large, firms may hold back effort because the costs of competing outweigh the likelihood of winning
- An added twist that can redefine winning and losing during a pandemic is public shaming of winners, estimating the effects of criticism on tournament winners' behavior
- *Tournament theory*: How rewards are distributed among “winners” and “losers” shapes managers' decisions.

Traditional view from SCM vs under pandemic situation



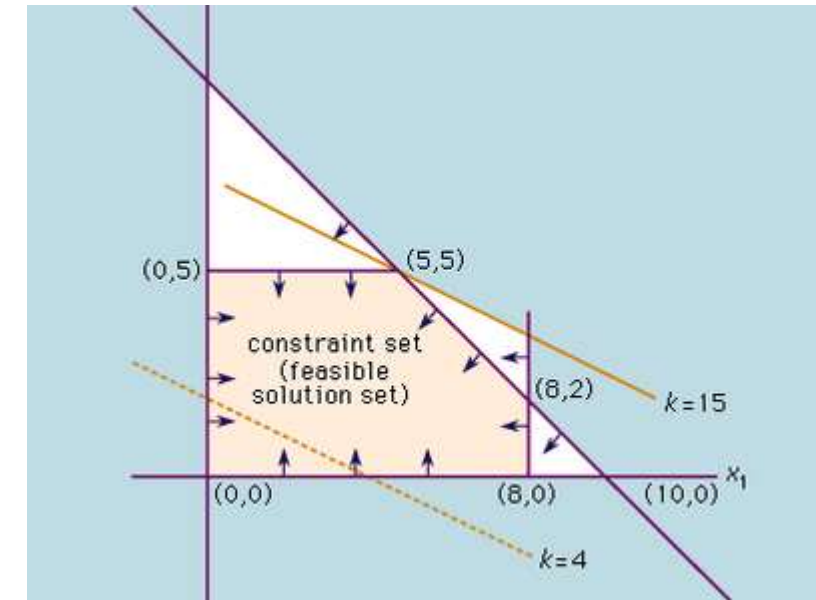
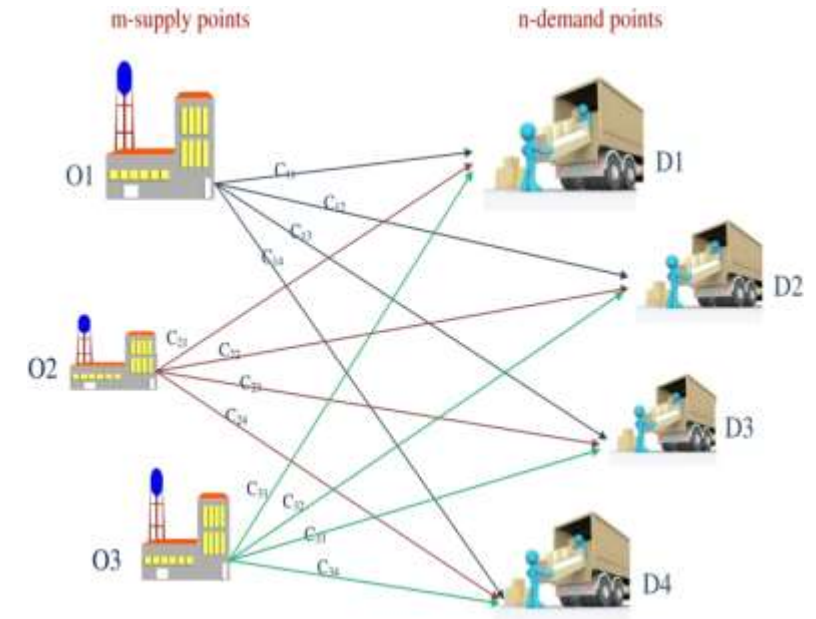
Typical disruption, companies quickly assess employees' physical wellbeing and the status of facilities and then move on to recovery.



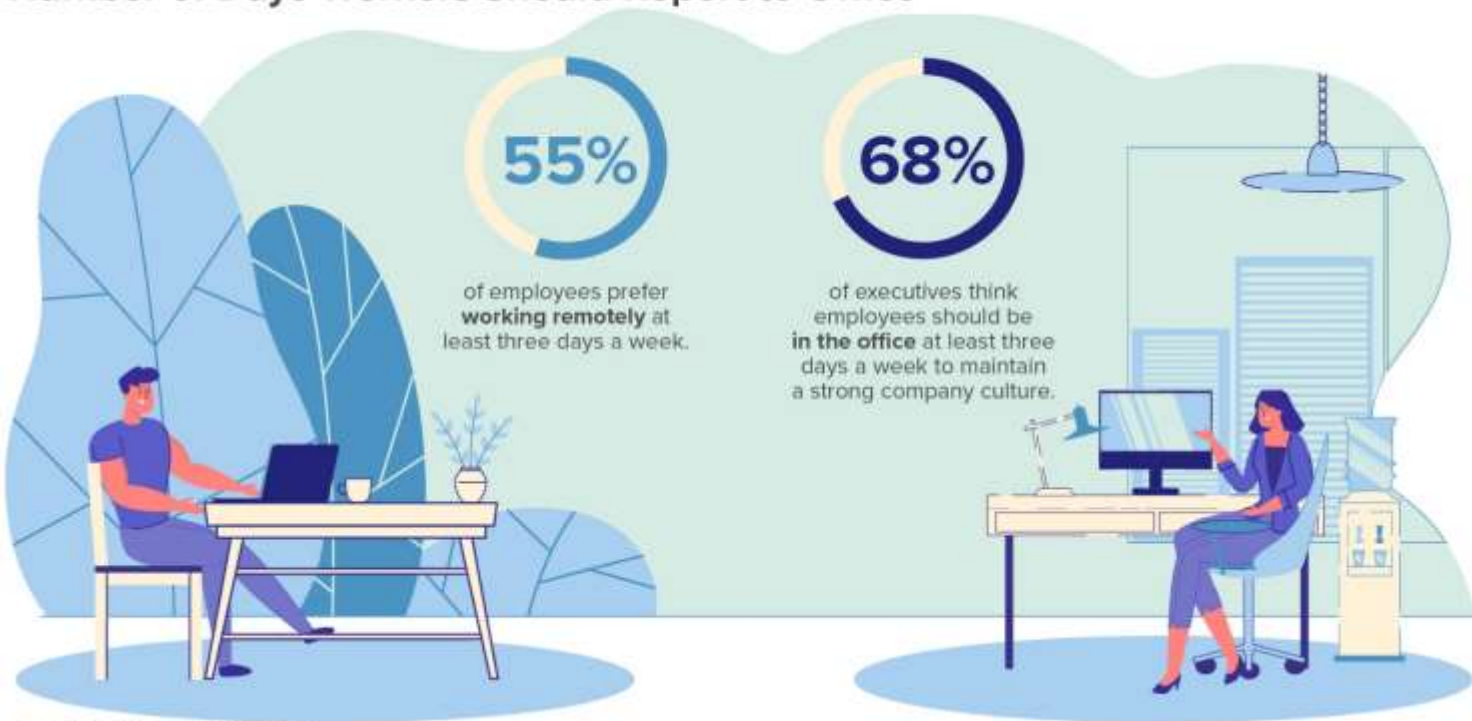
During pandemic, employee safety needs to be monitored continuously. A lagged and unexpected downturn in employee health can shut a facility down

Toolbox

- o Resource dependence theory
- o Institutional theory
- o Resource orchestration theory
- o Structural inertia theory
- o Game theory
- o Real options theory
- o Event system theory
- o Awareness-motivation-capability framework
- o Prospect theory
- o Tournament theory

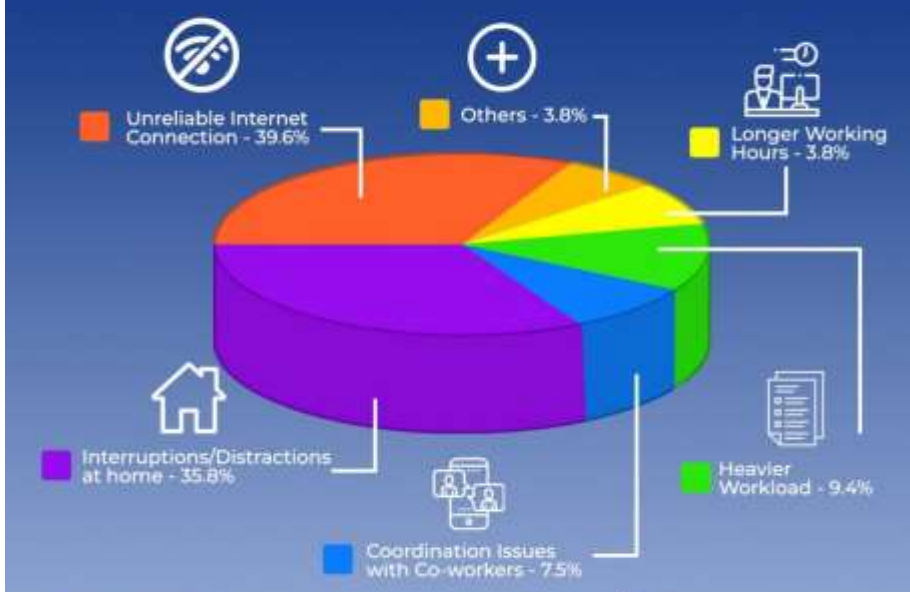


Post-COVID-19: U.S. Employees, Execs Differ over Number of Days Workers Should Report to Office



Source: PwC U.S. remote work survey

What were the biggest challenges you had to hurdle to get work done?



#TMCCPulse



References

- Bo, P. D. (2005). Cooperation under the shadow of the future: Experimental evidence from infinitely repeated games. *The American Economic Review*, 95(5), 1591–1604.
- Chen, M.-J. (1995). Competitive analysis and inter-firm rivalry: Toward a theoretical integration. *Academy of Management Journal*, 7.
- Craighead, C. W., Ketchen, D. J., & Darby, J. L. (2020). Pandemics and Supply Chain Management Research: Toward a Theoretical Toolbox. *Decision Sciences*, 51(4), 838–866.
- Edwards, J. (2014). *Mastering Strategic Management – 1st Canadian Edition*. Victoria, B.C.: BCcampus.
- Huang, Z., Li, S. X., & Mahajan, V. (2002). An analysis of manufacturer-retailer supply chain coordination in cooperative advertising. *Decision Sciences*, 33(3), 469–494.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340–363.