

Law and the new logistics

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The Pillsbury logo, featuring the word "pillsbury" in a lowercase, red, sans-serif font, is displayed on a white rectangular background.

The medium is my message

- Economics views actors as producers and consumers

A society's **economy** is based on creating wealth through selling and buying. The people who do the selling and buying are producers and consumers. Producers create, or produce, **goods and provide services**, and consumers buy those goods and services with money. Most people are both producers and consumers.

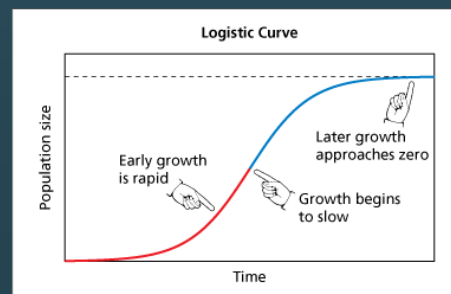
—*Encyclopedia Britannica for Kids*

- But how do goods (and services—and technology) move from production to consumption?
- “I’m not sure end users care about the details of transportation, except when they don’t work.” (*March 2021*)

Logistics as an economic activity in society

- Definition of logistics in business
 - Management and execution of the movement of goods from producer to consumer
 - Functions: packaging, transporting, clearing borders, breaking bulk, storing, providing information, managing risk, ...
 - Media: truck, rail, air, pipeline, vessel (ships, barges), warehouses, autonomous ...
 - Players: shippers, carriers, financiers, forwarders, logistics service firms, ...
 - Policies: contract expectations, risk allocation, macroeconomics (trade, investment), competition, environment and safety, national and personal security, ...
 - 6% of world GDP, US\$5.1 trillion in 2018

Extra credit: a *logistic equation* produces an *S-shaped logistic curve*, often observed in natural and human data sets. What's the connection between *logistic* and *logistics*?



Logistics pop up in (my) legal practice

- Occasionally for me, for shippers and customers more than carriers
 - Reviewing a carriage contract, vessel charter, or tariff
 - Negotiating the price and risk/delivery terms
 - Pursuing claims for loss and damage
 - Complying with regulations
- Is there a unified way of thinking about legal issues in logistics?
- How has COVID-19 affected logistics, temporarily or permanently, and what legal impacts will those changes have?

Logistics as a *very traditional* legal discipline

WILLIAM J. AUGUELLO, TRANSPORTATION, LOGISTICS & THE LAW (2d ed. 2004)

“The book is divided into four major sections. The first, and most important, is Augello’s narrative explaining the law and regulations covering every aspect of transportation, including:

- Federal v state jurisdiction
- Regulation of railroads, motor carriers, airlines and ocean carriers
- Regulation of brokers, forwarders and third-party logistics firms (3PLs)
- Multimodal shipping
- Contract law for transportation
- Liability for loss and damage
- Cargo insurance
- Shippers’ and carriers’ responsibilities
- Importing and exporting
- Terms of sale
- International laws and treaties
- Hazardous materials laws and regulations

Two large appendices contain the actual text of carefully selected statutes and regulations covering the most common problem areas impacting users of transportation. Approximately 30 small appendices follow, and include very handy tables, check lists, sample agreements, documents, glossaries and otherwise hard-to-find information that makes Augello’s book an everyday reference source.”

—*SupplyChainBrain, November 1, 2004 book review*

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Roiling waters beneath a placid surface

- Trade wars!
- Political sanctions!
- Offshoring or reshoring jobs, unions, and civic livelihoods!
- Anti-terrorism and physical security (sophisticated crime, or porch box-grabbing)!
- Cybersecurity!
- Larger and faster ships and trains, and infrastructure to match (or maybe not to match)!
- Adapting to rapid product development cycles!
- Robots, AI and drones transforming traditional carrier (and human) roles!
- Rise of Big Box and Big Tech in logistics!
- Perils of the sea, air and land!
- Responding to pandemics, conflicts, energy transition, and other “pattern disruptions”!

This is interesting, darn it!

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A legal view of some logistics issues

1. Global and local supply chains
2. Changes in transportation and players
3. The ESG overlay

1. Global and local supply chains

- Economic and policy vulnerabilities
- Security vulnerabilities
- Physical vulnerabilities
- 2020-21 lessons

1. Rise of global supply chains

- The global chain is decades in the making
- One reason COVID-19 impacted the world differently than SARS
- Asian manufacturing hubs and spokes (hard to pull away any part)
- Truly global (Apple iPhone contains ~70 elements in the periodic table, and components from over 200 suppliers in 43 countries)
- Just-in-time inventory
- Logistics even related to shorter duration of recent recessions?

1. Economic and policy vulnerabilities

- Impositions of higher import tariffs and antidumping charges
 - Solar panels, steel
- Economic sanctions
 - By country—multilateral or unilateral
 - July 2020 Iran, Sudan sanctions on carriers
 - By company or person—certain Russian entities
- Geopolitical realignments—Brexit and beyond
- Localized disruptions in production or logistics
 - Remember late 2019 and early 2020?
 - Affected factories and raw materials, but also transport and dock workforces
 - Meanwhile, 27-mile truck traffic jam in Poland; 42 ships anchored offshore Los Angeles while every warehouse within 60 miles was full; but no containers for Midwest farmers

1. Security vulnerabilities

- Security risks and enhanced measures since 9/11
 - Clearances and chain of custody keep ultimate seller and ultimate customer involved despite intermediaries
 - RFID and GPS monitoring of cargoes—beyond mere location to temperature, radiation and more
 - GPS jamming, 2019
- Cybersecurity risks
 - NotPetya/GoldenEye cyberattack, June 2017
 - FedEx Europe/TNT in Ukraine
 - A.P. Møller-Maersk (18% share, 76 ports) had 49,000 laptops and 3,500 servers “destroyed”
 - Thank goodness for a Nigerian blackout!

1. Physical vulnerabilities



ONE APUS, Dec. 1, 2020, en route Yantian-Long Beach
1,816 containers overboard, ~40 with hazardous materials

1. Risk planning and mitigation

- Regulations for large container ship construction, loading and navigation
- Communications and crisis management
- Rescue and recovery operations
- Property and liability insurance
- And after all the planning ... there are the legal claims (arising under domestic law(s), admiralty/maritime law, and conventions)

1. Risk allocation: cargo v vessel v others

- CARGO v CARGO – claims of general average, by which the risk holder of the lost containers may be compensated by the risk holder of the containers that weren't lost
- CARGO v VESSEL – Carriage of Goods by Sea Act (COGSA) and the Hague Convention may limit the vessel owner and charterer's liability
- GOVERNMENTS v VESSEL – must the vessel owner or charterer take any actions to retrieve or safeguard the overboard containers?
- OTHER – liability of inspectors, and whoever strapped in the containers?
Any professional on the load shifting formula or implementation of the formula, or on loading of the containers?

1. Risk allocation: seller v buyer

AN INKLING OF INCOTERMS® 2020 Robert A. James, Pillsbury Winthrop Shaw Pittman LLP

Term, Mode [⚡]	Meaning (must insert [place])	2 Seller's Delivery Obligation	3 Risk in Transit	4/5 Carriage Obligation/ Insurance Choice	6 Delivery Documents	7 Customs Clearance	9 Transportation Cost Allocation	10 Notices
EXW	Ex works <u>[delivery place]</u>	Place at B's disposal at named place, ready for loading by B or its carrier	B	B may arrange for carriage/B	B: evidence of taking goods	S: Assist B: Exp/Tran/Imp	S: None B: All	S: if needed for B to take goods
FCA	Free carrier <u>[delivery place]</u>	S premises: Load on B's transport Elsewhere: place at B's disposal on S's carrier, ready for unloading by B or its carrier	B	B/B	S: evidence of delivery Option: B: bill of lading when risk passes, not when loaded	S: Exp B: Tran/Imp	S: Exp, loading if S premises B: loading if elsewhere, Tran/Imp	S: delivered, or carrier failed to take timely
FAS [⚡]	Free alongside ship <u>[shipment port]</u>	Place alongside B's nominated ship at named port—e.g., on quay or barge—or procure goods there	B	B/B	S: evidence of delivery	S: Exp B: Tran/Imp	S: Exp B: Tran/Imp, other	S: delivered, or vessel failed to take timely
FOB [⚡]	Free on board <u>[shipment port]</u>	Place on board B's nominated ship at named port or procure goods there	B	B/B	S: evidence of delivery	S: Exp S: Tran/Imp	S: Exp B: Tran/Imp, other	S: delivered or vessel failed to take timely
CFR [⚡]	Cost [and] freight <u>[destination port]</u>	Place on board ship at <u>origin</u> port (name it) or procure goods there	B	S/B	S: transport document (e.g., bill of lading)	S: Exp B: Tran/Imp	S: Freight, Exp B: Tran/Imp, other	S: if needed for B to receive goods
CIF [⚡]	Cost, insurance [and] freight <u>[destination port]</u>	Place on board ship at <u>origin</u> port (name it) or procure goods there	B	S/S must buy clause C LMA/IUA insurance	S: transport document and policy or evidence of insurance	S: Exp B: Tran/Imp	S: Freight, Insurance, Exp B: Tran/Imp, other	S: if needed for B to receive goods
CPT	Carriage paid to <u>[destination place]</u>	Hand over to carrier at <u>origin</u> place (name it)	B	S/B	S: transport document	S: Exp B: Tran/Imp	S: Freight, Exp B: Tran/Imp, other	S: delivered, and if needed for B to receive goods
CIP	Carriage [and] insurance paid [to] <u>[destination place]</u>	Hand over to carrier at <u>origin</u> place (name it)	B	S/S must buy clause A LMA/IUA insurance (CIP 2010 clause C)	S: transport document and policy or evidence of insurance	S: Exp B: Tran/Imp	S: Freight, Insurance, Exp B: Tran/Imp, other	S: delivered, and if needed for B to receive goods
DAP	Delivered at place <u>[destination place]</u>	Place at B's disposal at named place, ready for unloading by B	S	S/S or B	S: as needed for B to receive goods	S: Exp/Tran B: Imp	B: Unloading, Imp S: Exp/Tran, other	S: if needed for B to receive goods
DPU (2010's DAT)	Delivered [at] place unloaded <u>[destination place]</u>	Unload at named place for B's disposal	S	S/S or B	S: as needed for B to receive goods	S: Exp/Tran B: Imp	B: Imp S: Unloading, Exp/Tran, other	S: if needed for B to receive goods
DDP	Delivered duty paid [to] <u>[destination place]</u>	Place at B's disposal at named place on S's transport beyond import customs, ready for unloading by B	S	S/S or B	S: as needed for B to receive goods	S: Exp/Tran/Imp B: Assist	B: Unloading S: Exp/Tran/Imp, other	S: if needed for B to receive goods

Robert A. James, *An Inkling of INCOTERMS® 2020*
(Full chart with annotations)

1. Re-emergence of localized supply

2020-21 experience and implications: which will linger?

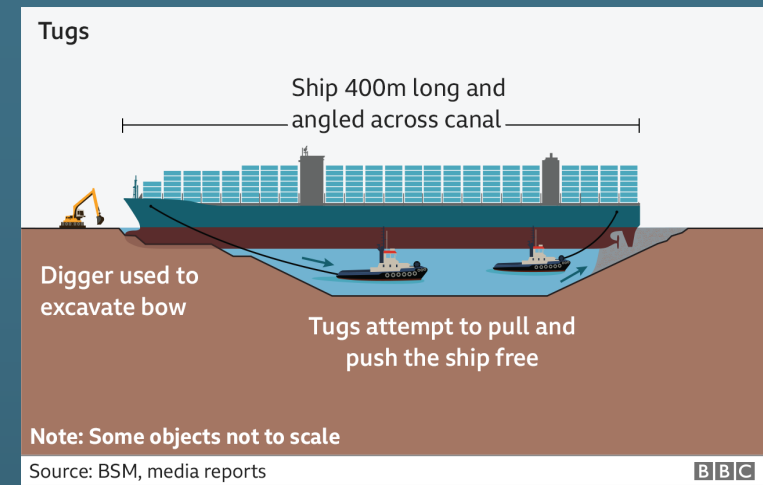
- Re-emergence of local or diversified manufacturing
- From just in time to just in case? Higher inventory levels
- Consumers fluctuate between “experiences” and “goods”
- Peloton's “problems”: air v marine, US plant acquisitions
- Standardization of components, resilient inventories
- 3D manufacturing at customer locations (titanium shortages!)
- Logistic company consolidation

2. Changes in transportation and players

2. Changes in transportation

- Vessels: Triple E (Maersk) and CSCL (Samsung) container ships
- Panama Canal, other port improvements to handle the new fleet
- And then there's the Suez Canal...

2. The *Ever Given*, March 2021



- Suez Canal 120 miles long, only some sections recently widened
- 1300 feet long, 18,000 containers, 400 million pounds at 15 mph
- Causes reviewed (engine/fuel? power? navigation in winds?)
- “Owned by a Japanese holding company, leased by a Taiwanese conglomerate (Evergreen), sailed by German operators and registered in Panama” with crew of 25 Indian sailors
- Despite all our technology and machinery, it took a “king tide” to free the craft—and free global logistics

2. Changes in transportation

- Airplanes with both passenger and freight capabilities
- New energy sources: electricity, hydrogen fuel cell, ammonia, ...
- High-speed rail
- Trucks with autonomous driving features, last kilometer
- Drone drop-offs and robot delivery routes
- Contactless modal transfers,
low-contact factories and warehouses
- AI: blockchain to narrow and shorten berth windows

2. Changes in transportation

Legal implications

- Regulation of autonomous vehicles, ride services
 - Modernizing the concept of the “freight forwarder”
 - Multimodal transport bills of lading (FIATA and others)
 - Spreading the cost of port infrastructure to the areas served (example of the Alameda Corridor in LA)
 - Energy transition vehicle compatibility (example of California)
-
- Robert A. James, *Energy and Infrastructure in a Pandemical World*, 20 *Pratt’s Energy Law Report* 189 (2020).

2. Changes in players

- Less than load (LTL) combinatorics
- Third party logistics (3PL) and even 4PLs
- Expanded roles for freight forwarders, and for multimodal transport
- Online purchasing, buy-online-pickup-locally
- Rise of the courier and “big box” logistics functions
- Followed by rise of the “big tech” logistics functions
- Competition, efficiency, consumer privacy concerns

3. The ESG overlay

3. The ESG overlay

- Environmental, social and governance criteria
 - Extended from companies to entire “supply chain,” including logistics
 - Labor and environmental conditions up and down the global chain
 - Justice and political aspects of offshoring/reshoring supply and workforces
 - Anti-slavery diligence and certifications
 - Conflict minerals and Dodd-Frank
 - Renewable fuels, “at berth” emission rules in Los Angeles/Long Beach
 - ISO 14000 and other qualifications for transport facilities
 - Moving from “mine/mill→product→disposal facility” to the “circular economy” of recyclable and post-consumer materials
- What is next for logistics?

The upshot

- The field of logistics is dynamic, and so are the legal issues
- 2020-21 produced a decade's worth of changes; some may fade but many will permanently alter the sector. Which are which?
- Expect further diversification of supply, consolidation of players, pervasiveness of technology especially AI, creative relationships among private parties—and lots of **regulation**, for commercial, government policy, consumer privacy and social justice concerns

Answer to extra credit problem: No known connection. “Logistic equation” comes from Greek *logos*, and is a distinction in math from exponential and geometric equations, while our “logistics” comes from French *logis* for “lodging,” first used in the military.

Sometimes in life there is no relation between very similar things, regardless of appearances! A good lesson in itself.

Thanks!

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