AFD Ep 428 Links and Notes - Containerization Part 3 (Bonus on Shipping Containers) [Bill/Rachel] - Recording June 5, 2022

- Wow somehow there's even more content on this topic from the 2016 2nd edition of the 2006 book "The box : how the shipping container made the world smaller and the world economy bigger" by Marc Levinson (2006, Princeton University Press)...
 - The 2nd edition includes a new preface about the reaction received to the groundbreaking 1st edition. It also has a significantly updated 14th chapter and a whole new 15th chapter.
 - The new chapter continues the story as some cities re-evaluate how much local value is really being generated by devoting the waterfront to job light automated terminals that send goods elsewhere for processing.
 - "If you build it, they will come" is no longer the safe bet it once was. Megaships demand deeper and larger berths, but those projects are expensive, with no guarantee that enough ships will come through to justify the investment. E.g. Wilhemshaven, Germany built a deepwater port in 2012 to handle ships too big for Hamburg or Bremen, but by 2014, they had seen almost no ship traffic at all. Quoting from a 2015 study "Shipping lines generally do not consult with the other actors in the transport chain on their projects. We have not found any evidence of attempts at coordination or prior warnings in this respect."
 - As technology improved, more and more jobs became automated: computers could keep track of containers during unloading and loading, taking over the work of manual checkers with clipboards; automated guided vehicles moved containers between storage yards and ships; unmanned stacking cranes automatically lifted containers. Work that used to be performed by longshoremen were now performed by machines that could be monitored by 1 or 2 people in a control room. The longshore unions, to bolster their numbers, signed the computer operators into the union.
 - In addition, containers that used to be processed at the docks were increasingly getting sent to distribution centers located far away, and jobs were leaving the area, so locals were asking why they were being forced to put up with congestion and diesel- and noise pollution for no local benefit to themselves. In response, Antwerp's port authority decided that it would only lease valuable waterfront land to companies that could explain in detail how many workers they would employ and how much value those workers would add. Fines would be levied for companies that failed to meet their promises. Facilities that involved manufacturing or processing goods arriving in containers fit the bill, and started moving into the area.
 - And it also delves into more of the throwaway economy stuff where goods get made and shipped all the way across the world and then destroyed in the port itself because demand fell out and it's all cheap garbage.
 - The Colon free trade zone in Panama which we'll talk more about in a bit had hundreds of warehouses where cheap goods, such as shoes or electronics, were stored. These goods, many never ordered by

wholesalers or retailers, would eventually be destroyed after months in the warehouse.

- Also he touches on the evolution of trade policy in the 80s with free trade zones (now often tax free zones) at certain ports anticipating the later free trade deals and that these were actually partly an incentives program to encourage warehouses and their jobs to remain at the waterfront instead of building them inland in some other community at the expense of coastal jobs.
 - Dubai built a man-made harbor in the village of Jebel Ali in the late 1970s for a containerport; it was the largest man-made harbor in the world. In 1985, Dubai created a free trade zone where shippers could bring merchandise into the country, store it tax-free in warehouses near the port, then ship it onward. This was to capitalize on Saudi Arabia's oil wealth. Jebel Ali, and Dubai as a whole, became the trade hub of the Persian Gulf, and later the financial hub of the region.
 - China, starting in the late 1970s with expansions in the 1980s and 90s, created Special Economic Zones along the Coast. These Zones are granted more free-market economic policies compared to the planned economy throughout the rest of the country. These Zones are able to offer attractive business deals to foreign firms, such as tax incentives and reduced regulations. These zones have allowed China to become an export powerhouse, and many of the world's largest container ports, handling millions of containers annually, are located in these Special Economic Zones.
- The new sections of the book are mostly not US related. That being said, there were two points he mentioned abroad that stood out to us for their US connections.
 - Dubai Ports World he talks a lot about in terms of Dubai's rise to prominence as a container trans-shipping hub between the Indian Ocean and the Mediterranean or Atlantic, even though it's extremely far out of the way to both of those.
 - But I also remember the Dubai Ports World controversy from February 2006 in _ the 2nd George W. Bush term. Dubai Ports World, the state-owned operator of the container port in Dubai and a multinational operator, tried to buy the British business that had significant leases of cranes and terminals at six major US ports (New York City, Newark, Baltimore, Miami, New Orleans, and Philadelphia). The Republican-led Congress, stoked by Democratic Senator Chuck Schumer of New York and a media firestorm, flipped out about the potential security risks, while President Bush championed the deal. Within a few weeks, DPW announced it would divest the US port leases as part of the acquisition of the British firm, although not to Vice President Dick Cheney's company Halliburton as initially reported. Before the scandal had concluded with the spinoff, it quickly emerged that the US Coast Guard had already advised against the deal as a security risk. Although the vast majority of US port operations were already foreign owned or foreign leased, even if generally not directly by a state-owned corporation, the security angle of the controversy helped to highlight the "black box" approach to the gigantic global trade in container shipments which are so numerous and so fast-moving that it is considered completely infeasible to perform any kind of meaningful or comprehensive security screening on their contents in any US ports or really just about any ports anywhere. However, it's a pretty valid question as to why this concern was substantially different with UAE state ownership vs

any other ownership, foreign or domestic. Even with the least charitable view toward Emirati terrorism links, any terrorism related to insecurity of container shipping could probably be achieved with zero inside involvement by the port operator. Another thing that happened during the controversy: It almost immediately also came out that Bill Clinton had been a consultant to the Emiratis (in exchange for presidential library donations and more) on the potential deal and its regulatory problems before it came to public knowledge, and his wife (then-New York Senator) Hillary Clinton, who had vocally opposed the deal, had to claim she didn't know about his consulting. Politically, the clash between the Republican Congress and the Bush Administration seemed at the time to be another demonstration that his 2nd term was in free fall and spinning out of control in the post-Social Security debacle and post-Katrina disaster period before the 2006 midterms that Democrats eventually won. https://en.wikipedia.org/wiki/Dubai_Ports_World_controversy https://en.wikipedia.org/wiki/P%260_(company)

The Panama-America story continues: And I noticed that the containerport mentioned at the Atlantic end of the Panama Canal Zone - Manzanillo International Terminal – was built on a repurposed abandoned WW2 US military base, further bolstering our arguments about the role of the American empire in this story. That old seaplane base, which succeeded a 1920 US fort, was handed over after the treaties under the Carter Administration in the late 1970s and was developed along with the nearby Colón Free Trade Zone as first a RORO (roll-on/roll-off) port and then a container terminal with two specific focuses: automotive shipments and transshipment, i.e. very little cargo was bound for Panama itself and instead was being re-sorted in Panama with other (mostly automotive) cargo going to the same destinations across Latin America. https://en.wikipedia.org/wiki/Manzanillo International Terminal The Colón Free Trade Zone, according to recent US government data, is the largest freeport in the Americas and the second largest in the world. It was established in 1946 and was always closely linked to the US presence in the 20th century as well as obviously developed-world tax haven activities notoriously highlighted in the Panama Papers leak of several years ago.

https://en.wikipedia.org/wiki/Col%C3%B3n_Free_Trade_Zone The Panama Canal Railway, originally built in the 1850s, was refurbished in the late 1990s after decades of decline because a private American consortium decided to take on the cost of fixing it specifically to aid the rapidly growing operations of container shipping on either side of Panama, and that consortium was put together by one of the American providers of terminal cranes. Because the canal is slow and has a maximum capacity, in 2001 (also around the time that Manzanillo terminal was privatized too), the newly renovated railroad meant it would actually be 8 times faster to lift containers from a ship on one coast to a train, send it overland, and load it back on to a ship waiting on the other coast. The railroad has far less capacity than the canal but it does help add some capacity and always crucially add vital speed to certain shipments. https://www.chicagotribune.com/news/ct-xpm-2001-10-07-0110070023-story.html https://en.wikipedia.org/wiki/Panama_Canal_Railway

- Ok great so what else does the book not cover that we should?
 - Grace Blakeley's article last week (May 31, 2022) in Tribune Magazine https://tribunemag.co.uk/2022/05/globalisation-shipping-global-trade (She is a

young British Marxist economist whose writing and thinking we've discussed before on the show for its interesting insights on capitalism under the Third Industrial Revolution)

- The just in time economy that containerization made possible is extremely vulnerable to shocks to the shipping system. The Covid-19 pandemic is a huge ongoing shock, with additional shocks occurring simultaneously with the Ever Given Suez Canal blockage and the Ukraine-Russia conflict. *The Covid-19 pandemic provided a vivid demonstration of what a stagnant global economy looks like. The world economy contracted by 3.3 percent in 2020—the largest recorded contraction in global GDP since the Second World War. Much of this decline was driven by falling trade volumes, which fell farther and faster than at any point since 1945. While in some respects, Covid-19 united the world in a common cause, it had a profoundly deglobalising impact on the economy.*
- Covid-19 hit this system like a heart attack. First, factories in China shut down, meaning there were fewer goods to load onto the ships docked at ports. At the same time, ports in China and the US were hit by worker shortages, which made it harder to load and unload the cargo that was available. New orders also slowed down as uncertainty about the future of the global economy affected consumption and investment.
- The turnaround time for a ship traveling from East Asia to the US has increased from 60 to 100 days. Backlogs at port cities has increased, further delaying the ships. At the height of the crisis, more than 100 ships were waiting off the coast of California. Many ships were diverted to the East Coast, but there are still huge lines. As of the publication date, 19 ships were waiting at LA-Long Beach; in mid-April, there were 18 ships waiting at Charleston, S.C. and 12 at Norfolk, VA. It's even worse in China, with a mind-boggling 344 ships waiting at Shanghai.
- All these delays have created a shortage of available ships and containers, sending shipping rates soaring. By late 2021, the cost of shipping to the West Coast of the US from East Asia rose 330% over just one year. While the shipping companies were making millions, the costs were being passed on to consumers. Higher shipping rates translate into higher consumer prices, but not until many months later, so much of the inflation we're experiencing now is the result of those historic effects. The United Nations Conference on Trade and Development (UNCTAD) estimated that higher shipping rates during the Great Lockdown pushed up inflation by 1.5 percent.
- This crisis has also affected working conditions for crews of these containerships: What's more, many boats were simply unable to dock because of Covid restrictions. This was a disaster for the already deeply exploited seafarers who made up the crew on these container ships. Many found themselves adrift, unable to see their families, and often without pay, for months on end.

The workers employed by these companies are paid poverty wages and denied basic rights. The ships sail under 'flags of convenience'—a form of regulatory arbitrage, which allows ships to register in jurisdictions with weak labour laws and low taxes to avoid basic obligations to their workers and society.

These massive profits and horrendous labour practices are hardly surprising given that the global shipping industry is one massive monopoly. Just ten companies—all based either in Asia or Europe—control eighty-five percent of global shipping capacity.

- Then there's the war in Ukraine. The United Nations Conference on Trade and Development has conducted a simulation to assess the likely impact of the war on supply chains. Prior to the war, around 1.5 million containers were being shipped through Russia by rail. As the report notes, if those containers all end up being transported by sea 'this would mean a five percent to eight percent increase in an already congested trade route'.
- UNCTAD notes that this disruption will likely lead to a further increase in shipping rates. Shipping tanker earnings in the affected region have already increased from around \$10,000 per day on 18 February to an astonishing \$170,000 per day on 25 February. Costs on these routes have only increased by around 400 percent, so most of this increase is accruing to shipping companies in the form of higher profits. It's also worth bearing in mind that nearly fifteen percent of the world's seafarers come from either Russia or Ukraine.
- Ratings agency S&P wrote in April that it sees little chance of the 'log jam' in global shipping ending any time soon. Drewry, which releases a monthly report on the state of global shipping, noted in March that the war was having a significant impact on an already stressed market. And if it takes twelve to eighteen months for higher prices to be felt in consumer prices, then the inflationary cycle which the UK and wider Western economy is experiencing, is only likely to get worse.
- That question we brought up before: What's the story of Soviet and Eastern Bloc containerization?
 - 1974-75: The Siberian Route The USSR decided to try to make a big play on the world markets by becoming a faster shipping route for Japanese goods to European markets by offering high-speed express freight rail service for containers across the Trans-Siberian line, with no import duties or tariffs but some (discounted) shipping rates for the rail service (paid in foreign currency that could be used for other key Soviet purchases on the world market), delivering containers 20 days faster than the 40-day sea route through the Indian Ocean. In January 1974, they opened a container terminal in Nakhodka Bay (recently renamed from Gulf of Amerika!) in Primorsky Krai on the coast of the Sea of Japan, around 85 km away from Vladivostok. And unlike Vladivostok, Nakhodka was the only year-round ice-free port on the Russian Pacific coast. (Unsurprisingly it remains a critical Russian port today.) The reason it had never developed as a major port prior to the second half of the 20th century is that onshore it lacked a lot of crucial natural resource supplies for outfitting, repairing, and restocking older ships and thus required significant capital investments and imports from other places to make it viable as a port, kind of like a remote Pacific island coaling station would.

The Soviets had made those investments for a quarter-century and grown a small fishing village to an industrial site and dockyard with 140,000 residents. Containerization always requires that kind of special capital buildout, but in a different way. So, building out this location for containers was the obvious choice, like in so many other new container ports around the world. Also not shocking from our prior discussions was that it was built at a coastal wetland at a river outflow, since not much else occupies those spaces previously and dredging the loose sediment is easy. Today millions of cubic meters of sediment have been dredged in the bay. The initial terminal at Nakhodka could only handle 1000 containers per day or 12-13 million tons of cargo per year – although this modest containerization alone immediately vaulted it to the second-largest port in the entire Soviet Union by annual volume. But also it wasn't a deepwater port ... yet. A bunch of Japanese companies with access to cheap Japanese financing and guality Japanese equipment had begun planning to deal with the latter problem for the Soviets since 1970; they dredged and built a new deepwater terminal over the course of 1974 and 1975 across the bay from the newly opened smaller terminal. Their objective was to have a deepwater port, named Vostochny to distinguish it from the titular Nakhodka facility, able to process 30 million tons of freight annually. They started opening it piece by piece in the mid-1970s but weren't expecting the entire complex to be completed until the 1990s, even before delays kept hitting. The Soviet government had to build factories just to churn out pre-fabricated components for housing apartments for the Soviet workers dredging and building the new terminal facilities across the bay, and they had to offer above-standard wages to incentivize workers to move there for the project. At the same time, the Soviets also built non-container commodity export facilities for raw materials from the Russian Far East (including coking coal to Japan as part of the construction deal), shipped out via the same bay. And Americans were brought in to work on setting up certain nearby industrial facilities and American computers to run the loading and unloading process. (The Times pointed out that this wouldn't have been permitted in Vladivostok for security reasons due to the Soviet naval base, which gave Nakhodka another new advantage as relations otherwise warmed a bit under Détente.) The City of Nakhodka established relations with the City of Oakland in April 1974 as well to bolster the potential flow of traffic in both directions from the two rising container port cities. https://www.nytimes.com/1974/01/15/archives/soviet-opens-a-big-contain er-terminal-container-setup-opened-in.html

https://en.wikipedia.org/wiki/Nakhodka

https://en.wikipedia.org/wiki/Nakhodka Bay

https://ru.wikipedia.org/wiki/%D0%9D%D0%B0%D1%85%D0%BE%D0% B4%D0%BA%D0%B0_(%D0%B7%D0%B0%D0%BB%D0%B8%D0%B2) https://www.nytimes.com/1975/11/11/archives/soviet-building-port-in-far-e ast.html https://en.wikipedia.org/wiki/Vostochny_Port https://www.upi.com/Archives/1981/08/03/New-Soviet-Pacific-ports-compl etion-lagging/3381365659200/

- The Soviets did also hope to promote a polar shipping route with icebreakers to container traffic but there wasn't much enthusiasm for that apparently. (That's mentioned in the first Times article.)

- The Times articles don't really get into the obvious point that container terminals needed to be built on the other side of the Soviet Union in order to match all this new capacity on the Pacific side if pass-through traffic was going to become a big thing. These construction projects might not have been as interesting or noteworthy as the new facilities on the Pacific side, however, because there was already more traditional cargo capacity there. The next article does eventually mention some specific details on those western ports but that's not what we'll be focusing on.
- July 1984 Geographical Review article on Soviet containerization 10 years later: "Containerization and the Trans-Siberian Land Bridge" by Victor L. Mote in Geographical Review Vol. 74, No. 3 (Jul., 1984), pp. 304-314 (11 pages) <u>https://www.jstor.org/stable/214941</u>
 - These Pacific container port terminal facilities built in the early to mid-1970s to link Japanese exports to European markets quickly came to be used by exporters in South Korea, Hong Kong, Singapore, Thailand, and to a lesser extent Australia and New Zealand. A narrow majority was still from Japan alone in 1981.
 - The Soviet government / Communist Party leadership had a totally different perspective on containerization from the very beginning in the 1950s. Because they did not have to listen to labor-union objections, they could freely pick and choose any dockside innovations in cargo transportation practices without all the weird and superfluous rules and agreements facing the Americans and the other Westerners. They also were uninterested in protecting jobs in specific occupations because they had such a shortage of labor in total that they wanted to free up as much manpower through capital investments in mechanization and automation as possible and redirect it into other jobs. Containers and pallets, according to the calculations of Soviet planners, could allow them to shift more than a thousand workers per million tons of cargo shipped in either of those new methods into other tasks. Boosting productivity per worker in the face of declining demographics but ever-growing economic needs was the order of the day when the 1970s arrived, as opposed to trying to "make work" for surplus workers. Soviet planners were well aware that transportation work and warehouse work at the start of the 1970s was still incredibly reliant on underproductive, labor-intensive manual labor and desperately needed to be mechanized. As in the United States, where railroads were struggling to rationalize and computerize their freight operations, freight often sat around in yards for no good reason waiting for a worker to be able to get it connected to the correct train bound for the correct destination in any kind of a timely manner. Even by the time of the 1984 article, Soviet planners were estimating that their modernizations of the transportation sector might allow 400,000 more workers by the end of the 1980s to be re-tasked even as cargo volumes were dramatically increasing thanks to the new container methods and volumes flowing through the country.
 - A map of the so-called Trans-Siberian Land Bridge shows Moscow serving as a convenient interior redistribution hub so that container rail traffic from the Pacific could zip across to three

major Soviet Baltic ports (including at least one with a rail ferry), several Eastern Bloc land border interchanges, or several major Black Sea ports. There were also earlier junctions deeper in the interior to split off toward Central Asia and Iran. The more than 8,000-mile journey across the Soviet Union was significantly shorter than the 13,000-mile Suez route, 14,000-mile Panama route, or the 17,000-mile South Africa route. It was originally conceived of in 1967 as a win-win for the Soviet government and for Japanese or European companies frustrated by the oceanic shipping cartels. Still, the experimental container shipping across Siberia, which began in 1971 several years before the first proper port terminal actually opened, was coming just so much later than all the American experiments since 1956 that we discussed in part 1.

By 1980, the Soviet-owned or leased container fleet (which doesn't count foreign fleets docking in Soviet ports) included 31 container ships and 31 roll-on/roll-off ships. By comparison, all combined American fleets had 95 container ships and 23 ro-ro ships. To help keep rapidly building capacity, Soviet planners requested 120 new or retrofitted merchant marine ships, 200 river crafts including barges, 50,000 container-capable rail flat cars, thousands of container-capable trucks, and many thousands of land facilities and railyards for container handling or intermodal transfers. But as in the United States, it was not always easy to get the shippers to change their practices in order to ship their goods by container. The Soviets also seem to have still been oriented toward using containers for finished products, especially high-value ones, as opposed to intermediate unfinished goods and base components that could be assembled later, but this was also partially a reflection of the differences in pricing for transportation of expensive goods vs cheap goods, since containerization and special Soviet rail shipping rates for that gave the most immediate advantages to high-value goods. That being said, trans-shipment of intermediate goods did also prove to be a good business for the Soviets: "The plan was successful in attracting shipments of industrial products like electrical goods, chemicals, automobile parts, and high-quality machinery."

- As of 1979, 10% of all East Asia to Europe container traffic was going via the Soviet Siberian overland route instead of by sea, and in the other direction from Europe to East Asia that figure was 5%. With Japanese trade specifically, the shares were much higher. Rail freight rates across the Soviet Union were still discounted for the pass-through container traffic, often undercutting sea route rates by anywhere from 10% to even 50%. Even with these discounts, the Soviet state and its corporations were managing to generate per-container profits easily, even when having to ship back empty containers much of the time.
- In one especially early warning sign for the vulnerability of what was going to evolve into the Just In Time shipping model, internal problems in Iran in the early 1980s created such a massive backup of containers at border crossings that the entire rail

network across the USSR backed up and the Pacific container ports suddenly couldn't offload boxes at the expected speed and projected trans-shipment travel times between Japan and Europe suddenly jumped from two weeks to three months, disastrously.

- The other thing really important to consider here is that the Soviet planners had become sort of fixated on the idea of express trans-shipment container service across the USSR sometimes at the expense of focusing on strengthening container service between and in or out of Soviet cities. At one point the author says that in the decade leading up to 1984, "domestic demand" (I think for container shipping) was only 40% met. The fairly extreme centralization of long-distance transportation infrastructure buildout in the Soviet Union, which was more a function of disinterested Russian Imperial policies and then stretched Soviet capital resources compared to the excessive American over-building of redundant rail and highway infrastructure, meant that the Soviet Union arrived at the container era with very constricted arterial capacity across its hinterlands and its heartlands and was probably going to need a lot more rail trackage to effectively serve significant new volumes of traffic. I think this calls to mind the point from the Levinson book that most planners and economists everywhere kept thinking of it initially as a process and technological innovation at the margins, as opposed to the thing that was going to vastly increase total volumes of commerce.
- One final point the journal article from 1984 touches on is a significant point of contrast with the American experience: Container delays in temporary storage and container theft or tampering, as well as tracking bureaucracy, were all much more prevalent in the Soviet Union, whereas the United States tended to experience those with pre-container breakbulk cargo instead.
- Another source of information on Eastern Bloc containerization is a now-declassified intelligence report from the CIA in 1973 on the somewhat late adoption of containerization in the Soviet sphere. https://www.cia.gov/readingroom/docs/DOC 0000309577.pdf One way in which containers were expected to slightly improve trade and military strategy inside the Warsaw Pact was that containers could be moved much faster than other freight transportation modes between rail cars of different track gauges, which was a persistent problem between the wide-gauge Soviet Union and its standard-gauge Central European communist satellites. It still meant delays but nowhere near as long. Romania and Poland for example are standard but the USSR's member republics like Ukraine and Lithuania were not. The CIA overall was not especially impressed about the Soviet Union's planned investments into containerization pointing out how small its financial earmarks for this were set to be compared to American capital investments and pointing out how little capacity was set to be added relative to the American facilities and boxes and ships already on line. The lack of a domestic highway system comparable to the American highway system in the USSR (or also Poland for that matter) limited the true potential explosion of container traffic within the interior as opposed to along rail arteries across from one end to

the other, and navigable rivers were often icebound for at least some of the year if not much of the year. "Lack of widespread internal handling facilities will limit the large containers to mostly international railroad transit routes." Lack of computer technology in the USSR was also identified as an obvious bottleneck because of how important computers were to running any efficient container facility, or in the case of ports a safe loading process at all. The report also details much more clearly than the NY Times articles the progress at a number of ports all over the Soviet Union for converting or upgrading traditional dock facilities to be able to handle containers. And in fairness, it was pretty slow and small progress. Soviet containerships themselves tended to be built in shipyards of the other communist Eastern European countries or in other nearby places like Finland or France. East Germany was cited specifically as an early leader in container services within the Eastern Bloc. Landlocked Hungary had made some early experiments as well but not followed through on them, although they eventually started focusing on manufacturing of boxes and cranes for sale abroad. The report also mentions some regular destinations of western Soviet containership trips carrying boxes from the east - usually Japan but increasingly also Hong Kong even then - were London, Liverpool, Varna, Hamburg, Rotterdam, Le Havre, Alexandria, and an unspecified port in Italy. Routes were also added across the Mediterranean and Atlantic to Canada and across the Pacific to the US. The 1973 CIA report interestingly and somewhat bitterly reports that the United States was struggling to win a similar transcontinental "land bridge" traffic to compete in the other direction around the world for Asian exports to Europe because of the existing regulatory regime on freight shipping rates and the infighting between various private American transportation companies. Most of these were abruptly straightened out by a sudden political shift in the elected government in the mid-to-late 1970s on the issues of regulation and mergers. The report closes with one page detailing the clear military advantages of containerization with a vague allusion to the fact that other countries (the US isn't mentioned by name) have already more than proven this.