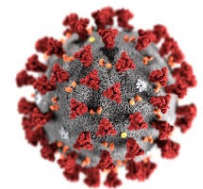


The Crisis of the Supply Chains and its impact on Chile and the World

Ricardo Ernst
Baratta Chair in Global Business
Professor of Operations and Global Supply Chain
Georgetown University



CONTRADICTION



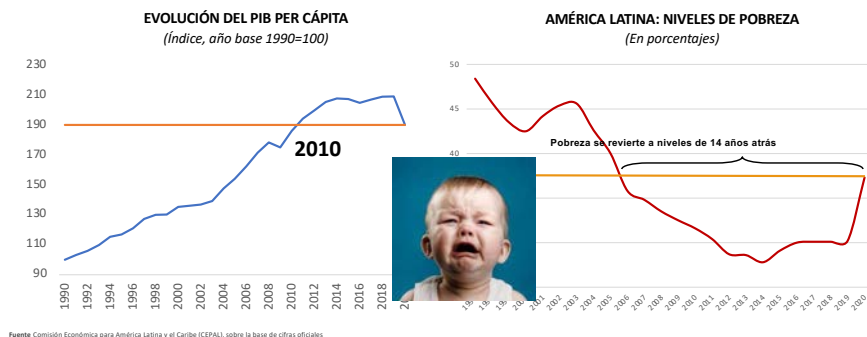
Is Individual → but affects EVERYBODY
Is Invisible → but VERY Visible
Does not Discriminate → but IT DOES

AMÉRICA LATINA Y EL CARIBE ES LA REGIÓN EN DESARROLLO EN LA QUE EL COVID-19 HA TENIDO EL PEOR IMPACTO

- América Latina y el Caribe representa el **8,4%** de la población mundial, pero registró el **28,7%** de los fallecimientos mundiales por COVID-19.
- Mayor contracción económica en 120 años : 6.8% en 2020; las exportaciones **cayeron** alrededor de un **13%** y más de **2,7 millones** de empresas (en su mayoría pymes) cerraron.
- Tasa de desempleo: **10,7%** (**44,1 millones** de personas).
- Marcado descenso de la **participación laboral**.
- **209 millones** de personas en situación de pobreza y **78 millones** en situación de extrema pobreza (33.7% and 12,5% de la población total).
- América Latina y el Caribe es la región **más endeudada** del mundo en desarrollo (79% del PIB).
- Tiene el mayor servicio de deuda externa **en relación con las exportaciones** de bienes y servicios (57%).
- El **déficit externo** en el Caribe crecerá del 4,5% al **17%** del PIB regional.

UNA DÉCADA PERDIDA

Al cierre del 2020, el PIB per cápita **habría perdido el crecimiento ganado en los últimos diez años** y los niveles de pobreza **habrían retrocedido 14 años**



Latin America a través del



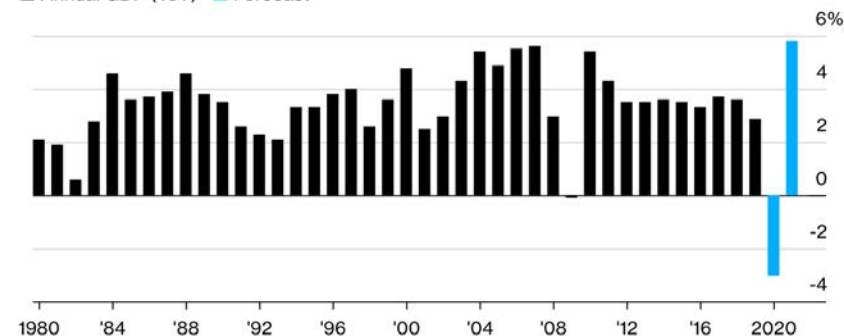
The Economist



Deep Global Recession

The IMF is predicting a 2020 global contraction of 3%

■ Annual GDP (YoY) ■ Forecast



Covid-19 podría empujar a más de 500M de personas a la pobreza

Aumento de personas en situación de pobreza debido a una caída de ingresos del 20% causada por la recesión de Covid-19 *.



* Nivel de pobreza: Personas que ganan menos de \$ 5.50 por día.
Fuente: Oxfam



statista

HABLO EN
SERIO

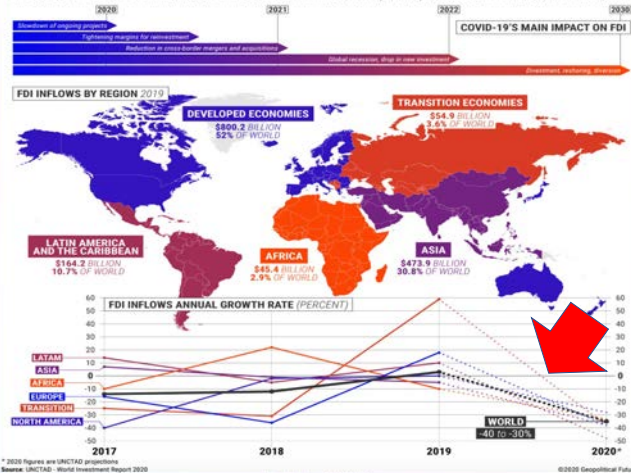
Crisis

- ✓ SALUD
- ✓ HUMANITARIA
- ✓ ECONÓMICA

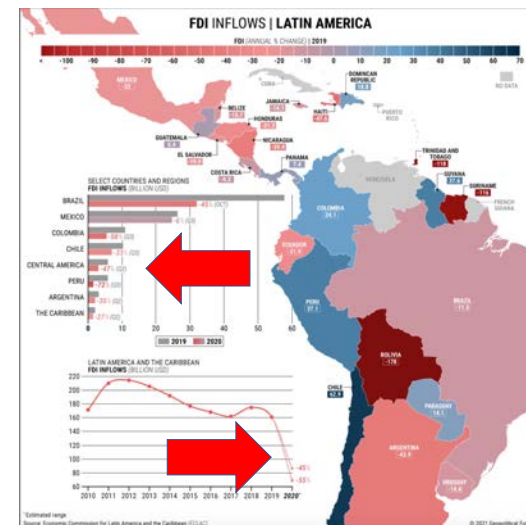
DISRUPTION

GLOBAL INVESTMENT OUTLOOK

The COVID-19 crisis will cause a dramatic fall in FDI. Global FDI flows are forecast to decrease by up to 40 percent in 2020, from their 2019 value of \$1.54 trillion.



this is
very bad



Global Supply Chains



From Electronics



to Textiles



to Pharmaceuticals ...



Supply Chains have been **more distributed** in response to **local market pressures** such as **more demanding consumers**.

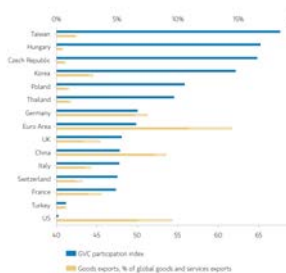


Why Trade Tariffs Could Rattle the Global Supply Chain

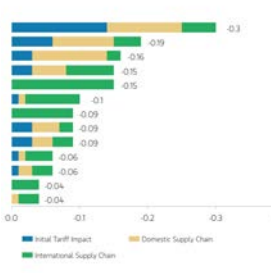
The importance of global value chains means that import tariffs will have significant implications beyond the U.S., China and euro area. A look at the regions and sectors most affected.

Morgan Stanley

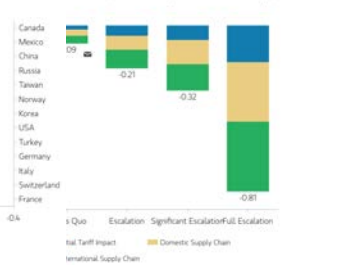
European and Asian Countries Top the Ranks of GVC Participation (Top Countries by GVC Participation)



Impact on Countries in "Status Quo" Scenario (Tariff Impact on GVA in Percentage Points)



Escalation of Trade Tensions Could Have an Impact on Global GDP (Estimated Impact on Global GDP in ppt)



Media discussion of supply chain and virus skyrockets

News Coverage

supply chain AND virus



How novel coronavirus could change the map on global manufacturing

Coronavirus threatens Apple supply chain, sales; shares drop

Coronavirus wreaks havoc on luxury and fashion groups

How Fast Can a Virus Destroy a Supply Chain?

CBINSIGHTS

Sources: CB Insights, Bloomberg, Financial Times, Reuters, PBS

Coronavirus Is Proving We Need More Resilient Supply Chains

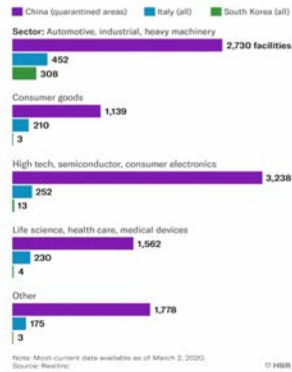
by Tom Linton and Bindya Vakil
March 05, 2020

Summary Save Share Comment Print 50.90 Buy Copies



Dependence on Quarantined Areas

The world's largest 1,000 companies or their suppliers own more than 12,000 facilities — factories, warehouses, and other operations — in Covid-19 quarantine areas.



World trade and GDP

Volume indices, 1980=100



Source: IMF

For most of the last 50 years, trade has been growing faster than GDP

Global supply chains are becoming increasingly more fragmented



**THE MAGIC OF
SUPPLY CHAINS**

is basically the responsibility of one and only one reason

2016 marks the 60th anniversary of the modern container shipping industry. It started in 1955 when a trucking entrepreneur from North Carolina by the name of Malcolm P. McLean bought a steamship company. His intention was to transport entire containers of trucks instead of having to load and unload them individually.



There are about:
25 MILLION Containers and
6,000 ships in the world!

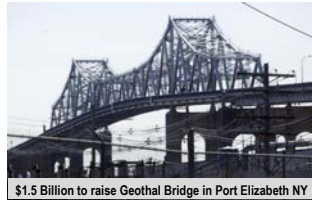
Over 90% of world trade is transported by sea
most by container ships



Panama Canal Expansion
will increase maximum capacity
5000 TEU ("Panamax") to
13000 TEU ("New Panamax")



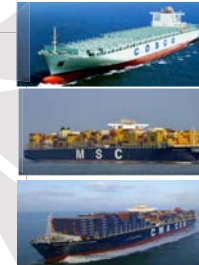
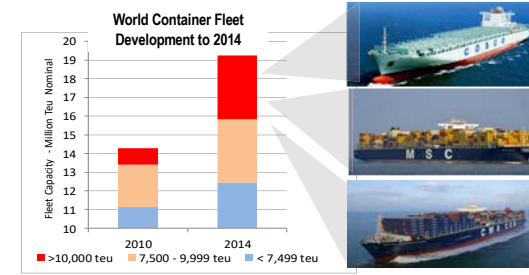
*It is unleashing a big race in investment
between ports in west and east of US*



\$1.5 Billion to raise Geothermal Bridge in Port Elizabeth NY

Over 90% of world trade is transported by sea
most by container ships

80% of all new ships are very big ones (VLCS/ULCS)



The industry has been pushing economy of scale in size of ships

Largest Container Ship

	(TEU)
1980:	2,800
1990:	4,800
2006:	7,100
2011:	15,500
2013:	18,000



Are these ships making globalization
faster, cheaper, and more reliable?

US China Tariffs: Consider Changing Your Supply Chain



BARRON'S

As Tariffs Hit, Supply Chains Become a Hot Topic for Investors

By Nicholas Jaremski Nov. 10, 2018 7:00 am ET



Whatever The Outcome Of U.S. - China Trade Talks, Global Supply Chains Are Set To Change

Markets

World's Top Toymaker Joins Companies Leaving China's Factories

By Jeff Sutherland
July 24, 2019, 3:52 AM EDT

Your Next iPhone Might Be Made in Vietnam. Thank the Trade War.

Samsung already assembles half of its handsets in the country, which got a big lift from U.S. tariffs on Chinese goods. Now Apple is homing in.

By Raymond Zhong

July 30, 2019

BAC NINH, Vietnam — No country on earth has benefited from President Trump's trade war with China more than Vietnam.



Very Painful: Trade War Has Tech Suppliers Moving Out of China

laptop maker Inventec Corp. said it will shift production of notebooks for market out of China within months.

Aug 13, 2019

laptop maker Inventec Corp. said it will shift production of notebooks for the U.S. out of China within months, adding to the tech industry's exodus as the world's two superpowers escalate their trade war.



THE WALL STREET JOURNAL

Manufacturers Want to Quit China for Vietnam. They're Finding It Impossible.

Global companies are rushing to seek alternative bases, only to find even promising countries like Vietnam can't match up.

By David G. Bonker

August 12, 2019 10:00 AM



SUPPLY CHAIN

Sony, Harley-Davidson, Others Move Production from China to Thailand

At least 10 firms are in the process of relocating. More than a dozen others m...



GLOBAL SUPPLY CHAIN

Tariffs Alter Global Supply Chain

Executives are citing the trade war as the final straw in their shift out of China.



THE WALL STREET JOURNAL

Apparel Companies Fear Tariffs Could Squash Profits

PROPERTY REPORT

Apparel Companies Fear Tariffs Could Squash Profits

About 40% of all clothing and 70% of shoes sold in U.S. are made in China

By David G. Bonker

August 12, 2019 10:00 AM



SUPPLY CHAIN

Sony, Harley-Davidson, Others Move Production from China to Thailand

At least 10 firms are in the process of relocating. More than a dozen others m...



GLOBAL SUPPLY CHAIN

Tariffs Alter Global Supply Chain

Executives are citing the trade war as the final straw in their shift out of China.

During the lockdown, US consumers swapped services for goods

Spending Q1 2019 vs. Q1 2021, % change in personal expenditure

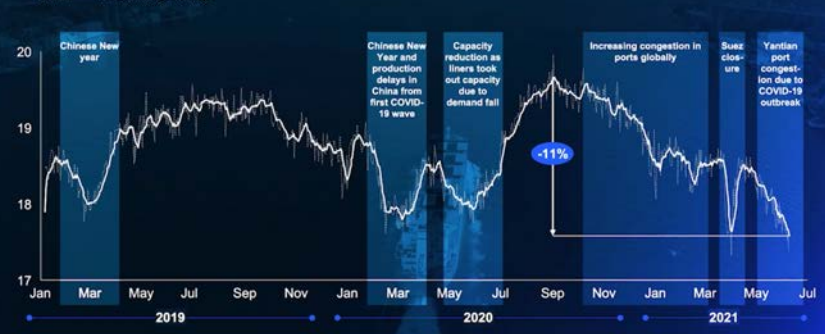
Goods
Services

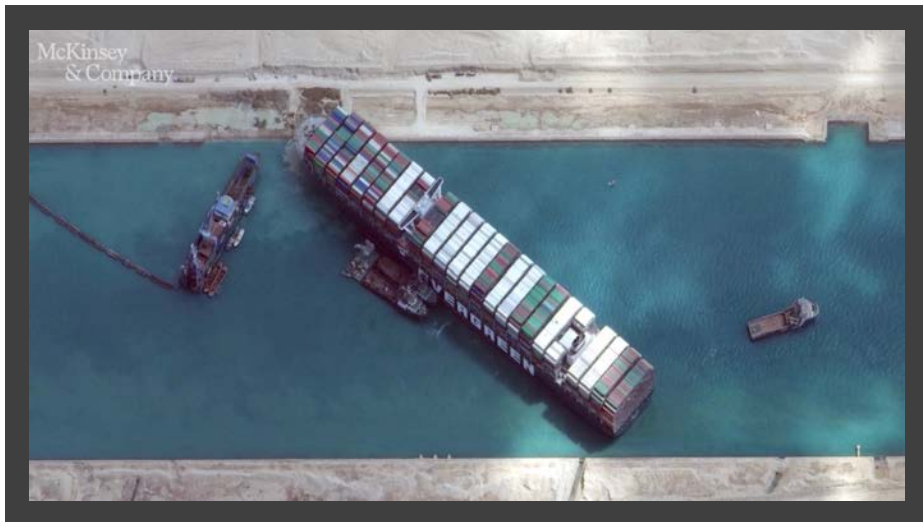


Demand peaked in the US, but ship supply fell due to congestion

Daily containership sailing capacity, Mn TEU

Actual 7-day moving average





One Stuck Container in Shanghai Reveals a Global Supply Chain in Crisis



Shanghai



Chicago



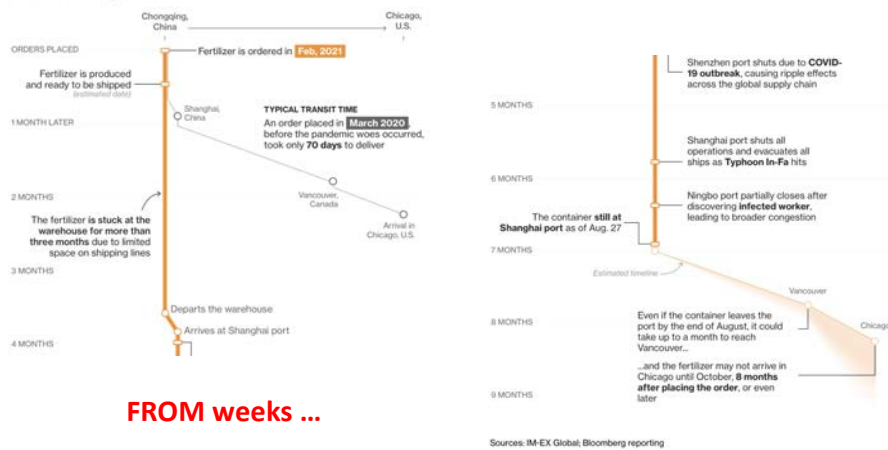
How long should it take to deliver a container of fertilizer?



<https://www.bloomberg.com/news/newsletters/2021-08-30/supply-chain-latest-one-stuck-container-in-shanghai-reveals-crisis?ref=HMT684C>

An Arduous Journey

Covid outbreaks, extreme weather and the broader congestion in the global supply-chain network have stretched a delivery that ordinarily would take weeks to more than half a year.



FROM weeks ...

Supply chain disruptions are costly

Shock exposure



Unexpected events that cause disruption

Force majeure
Macropolitical
Malicious actors
Idiosyncratic

Vulnerability



Fragility in key areas

Demand planning and inventory
Supplier network structure
Transportation and logistics
Balance sheet
Product and portfolio complexity

Value chain risk



Companies can expect to lose

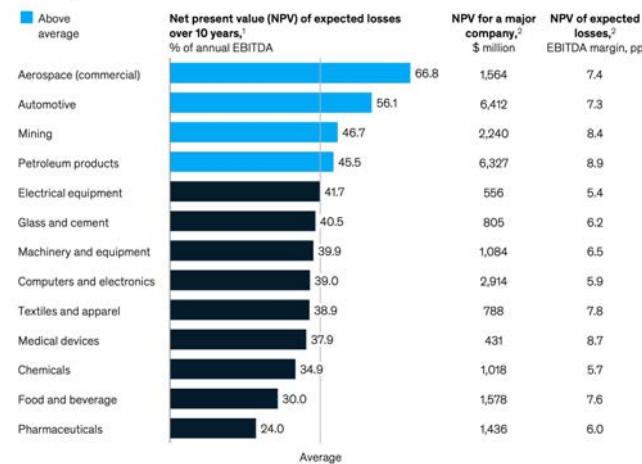
42%

of one year's EBITDA every decade.
Investing to minimize these losses can pay off over the long term

Companies can build resilience by improving supply chain management and transparency, minimizing exposure to shocks, and building their capacity to respond

HIGH COST

Expected losses from supply chain disruptions equal 42 percent of one year's EBITDA on average over the course of a decade.



10234
56789

180
products are predominantly exported from a single country, opening the door to bottlenecks

\$44 billion
China's annual exports of auto parts

Shocks lasting a month or more occur every
3.7 years

80%

of global trade involves nations with declining political stability scores from the World Bank

\$4.4 trillion
in global trade flows through the five most exposed value chains

16–26%
of global exports could shift to different countries due to economic and noneconomic factors

Companies can expect to lose almost

45%

of one year's profits over the course of a decade