



香港紡織及成衣研發中心  
The Hong Kong Research Institute of  
Textiles and Apparel



# Global Operations in an Pandemic

Managing Supply Chains in Challenging Times

The background of the slide features a dark, monochromatic red and orange color scheme. It depicts a city skyline with various building silhouettes, some appearing damaged or in ruins. In the foreground, several human figures are shown as dark silhouettes against the bright background, representing zombies. One large zombie is in the center-right, with its right hand raised in a claw-like gesture. Other smaller zombies are scattered across the scene, some with their arms outstretched. The overall atmosphere is one of a post-apocalyptic or zombie-infested urban environment.

# Global Operations in an Apocalypse

Managing Supply Chains in Challenging Times

What happened?

How should we respond?

What should we be thinking about  
when all this is over?

A brown snake with black spots is coiled on a red background. The background is filled with white, circular particles of varying sizes, some of which have a dark center, resembling a microscopic view of a biological sample. The snake's head is visible at the top left, and its body forms a large loop in the center. The overall scene is brightly lit, with a strong light source from the right side, creating a glow and casting shadows.

**WHAT HAPPENED.**

# Coronavirus Briefing: China's PMI Slumps as Disruption Continues in Supply Chain; International Demand Could Be the Next Challenge

## Supply Disruptions: Manufacturers went off line

**CORONAVIRUS BRIEFING:  
CHINA'S PMI SLUMPS AS DISRUPTION CONTINUES IN SUPPLY  
CHAIN; INTERNATIONAL DEMAND COULD BE THE NEXT CHALLENGE**

# Chinese industrial production fell by 13.5% in the first two months of the year



**Supply Disruptions:  
Manufacturers went off line**

Source: China National Bureau of Statistics

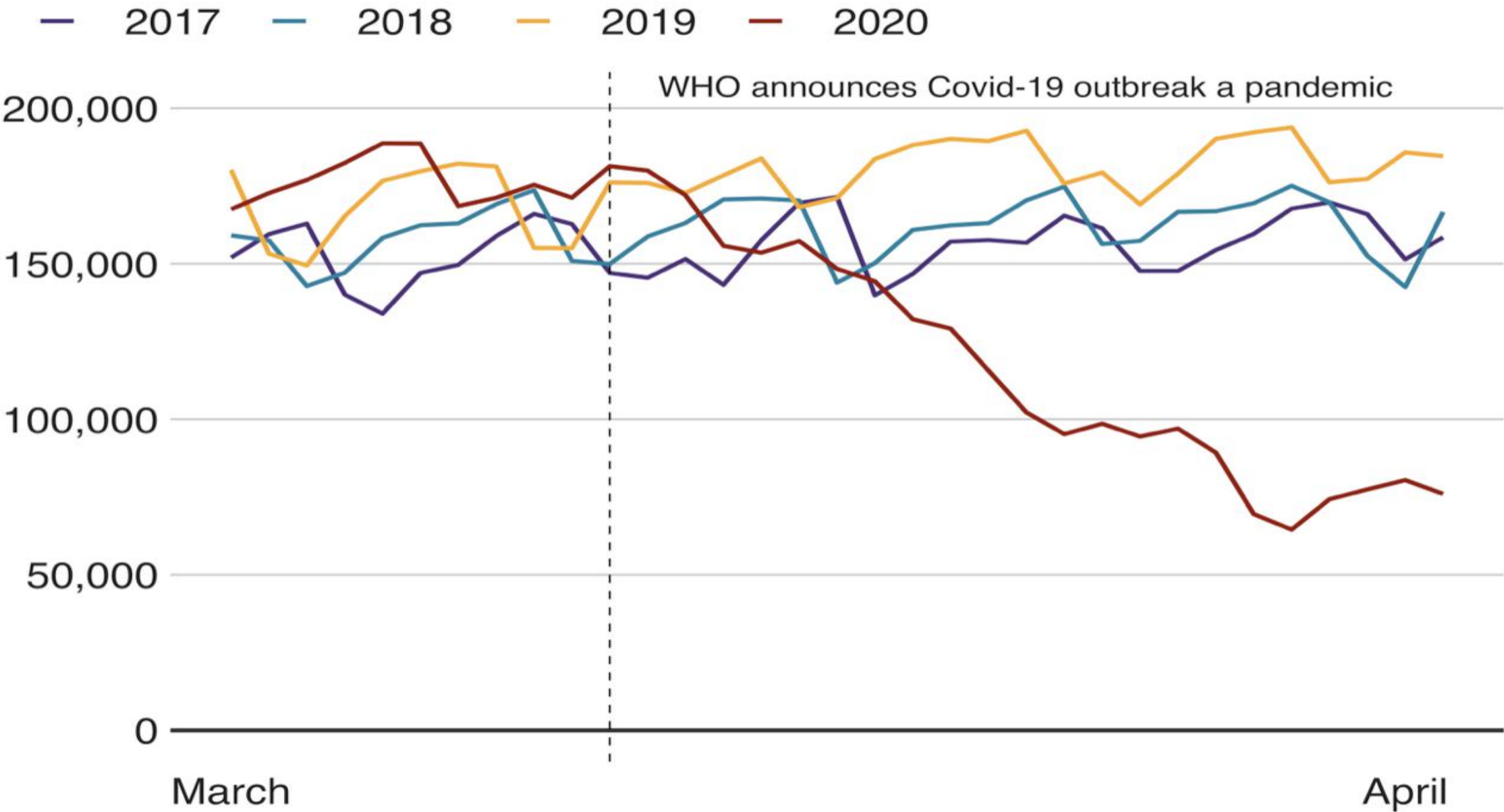
## Changes in the number of available flights

This data shows month over month changes in the number of economy flights leaving within a month available on a given day. Month over month data is calculated as 28 days ago in order to compare the same day of the week, and all flight data is for flights originating from the United States. For example, if 1 million flights were available from the United States to China on February 1st but only 900,000 flights are available on February 29th (28 days later), then the data would show -10%.

Destination	3/06	3/07	3/08	3/09	3/10	3/11	3/12	3/13	3/14	3/15	3/16	3/17	3/18	3/19	3/20	3/21	3/22	3/23	3/24	3/25	3/26	3/27	3/28	3/29	3/30
Canada	9%	19%	7%	11%	18%	41%	32%	32%	11%	-11%	-19%	-37%	-42%	-53%	-51%	-43%	-63%	-67%	-55%	-65%	-66%	-63%	-65%	-64%	-74%
China	5%	32%	15%	27%	44%	97%	86%	51%	37%	21%	12%	-32%	-51%	-64%	-61%	-58%	-69%	-72%	-81%	-89%	-90%	-97%	-96%	-96%	-98%
France	13%	36%	33%	35%	54%	64%	75%	29%	-6%	-21%	-33%	-50%	-60%	-63%	-62%	-61%	-72%	-72%	-75%	-73%	-73%	-72%	-68%	-71%	-80%
Germany	20%	28%	27%	17%	19%	42%	44%	23%	4%	-3%	-28%	-47%	-59%	-63%	-56%	-65%	-70%	-73%	-70%	-66%	-60%	-64%	-75%	-76%	-82%
India	-27%	-17%	-19%	-26%	-17%	0%	-14%	-34%	-52%	-59%	-70%	-82%	-85%	-85%	-88%	-88%	-91%	-93%	-95%	-97%	-97%	-97%	-96%	-95%	-98%
Israel	-28%	-24%	-25%	-25%	-26%	-19%	-26%	-47%	-38%	-55%	-66%	-80%	-80%	-81%	-80%	-80%	-89%	-91%	-89%	-91%	-92%	-93%	-91%	-92%	-95%
Italy	20%	56%	56%	46%	16%	4%	-6%	-29%	-45%	-54%	-60%	-71%	-75%	-77%	-74%	-78%	-83%	-84%	-81%	-82%	-81%	-82%	-81%	-83%	-86%
Japan	26%	53%	38%	44%	59%	85%	87%	61%	39%	14%	4%	-5%	-6%	-17%	-20%	-17%	-41%	-48%	-35%	-48%	-47%	-44%	-38%	-44%	-59%
Mexico	2%	6%	9%	4%	11%	22%	19%	17%	0%	-14%	-27%	-39%	-48%	-59%	-52%	-41%	-58%	-56%	-48%	-59%	-61%	-60%	-57%	-68%	-78%
United Kingdom	32%	26%	19%	13%	14%	17%	42%	14%	5%	-21%	-34%	-54%	-63%	-64%	-54%	-52%	-63%	-70%	-72%	-72%	-69%	-66%	-60%	-61%	-73%
United States	5%	12%	14%	7%	10%	12%	9%	0%	-13%	-30%	-40%	-45%	-54%	-63%	-56%	-46%	-60%	-64%	-55%	-69%	-69%	-72%	-63%	-62%	-76%



# Number of total daily flights



Source: Flightradar24, 03 April 2020

# China Retail Sales Slide During Coronavirus Shutdown: Implications for US Retail



## Demand Disruptions: Retailers went off line

**CORONAVIRUS INSIGHTS:  
CHINA RETAIL SALES SLIDE DURING CORONAVIRUS  
SHUTDOWN: IMPLICATIONS FOR US RETAIL**

Sorry  
WE'RE  
**CLOSED**

## Editor's Picks



Retail

### Macy's Furloughs 'Majority' of 130,000 Staff as Virus Takes 'Heavy Toll' on Retail

Indefinitely idled stores are forcing retailers from Macy's to Canada's Reitmans to make difficult decisions on the staffing front.

[READ MORE](#)



Labor

### Outbreak Leaves Garment Workers Stranded and Unemployed

Amid the COVID-19 crisis, millions of workers in Asian garment-producing nations are finding themselves stranded without jobs.

[READ MORE](#)

## More News



Business News

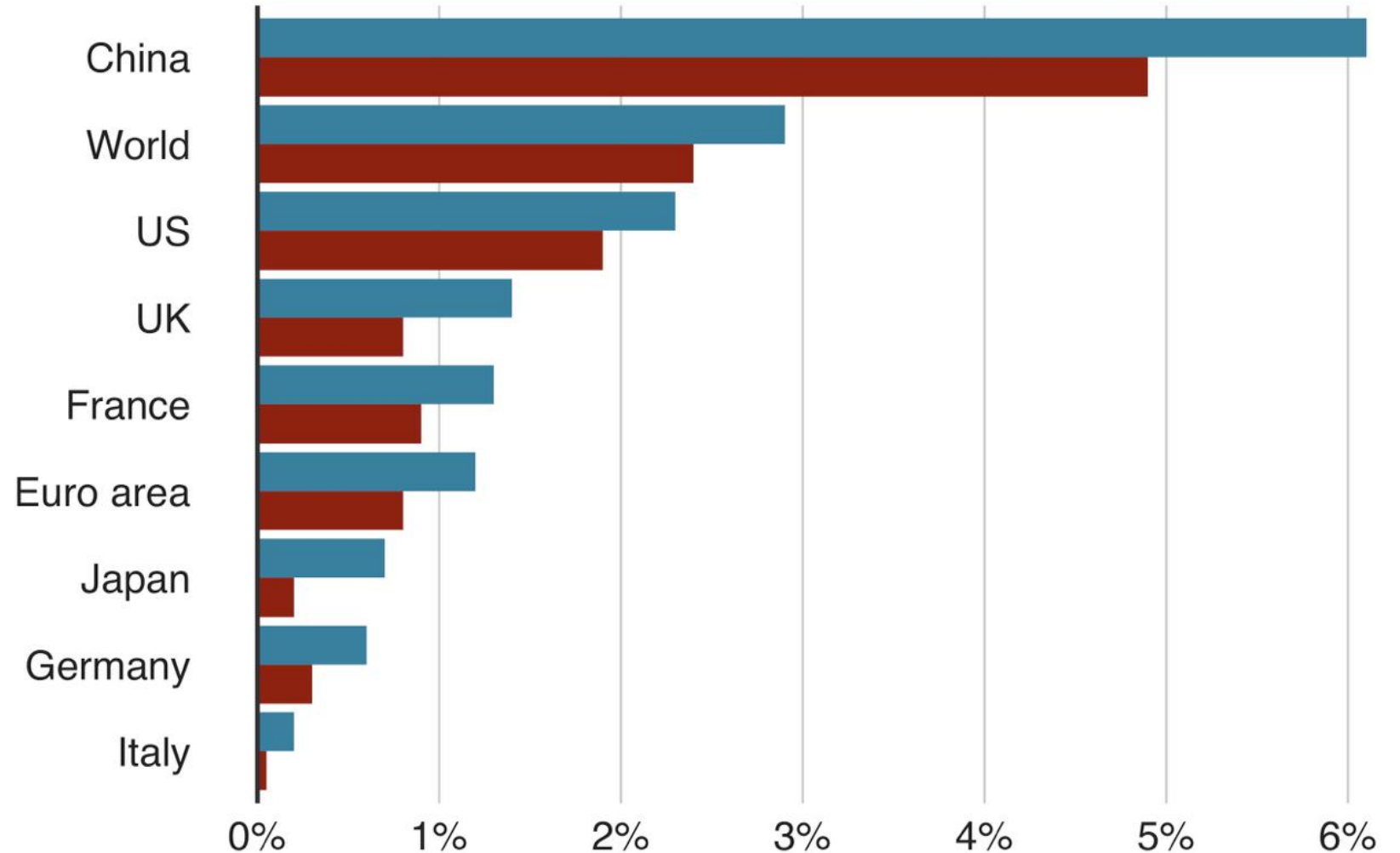
### Millions Face Poverty in East Asia, Pacific, Where Pandemic Will Pummel Growth: World Bank

[READ MORE](#)

# OECD downgrades growth forecasts

## Economic growth (GDP) expected to slow down in 2020

■ Growth in 2019 ■ Growth forecast for 2020



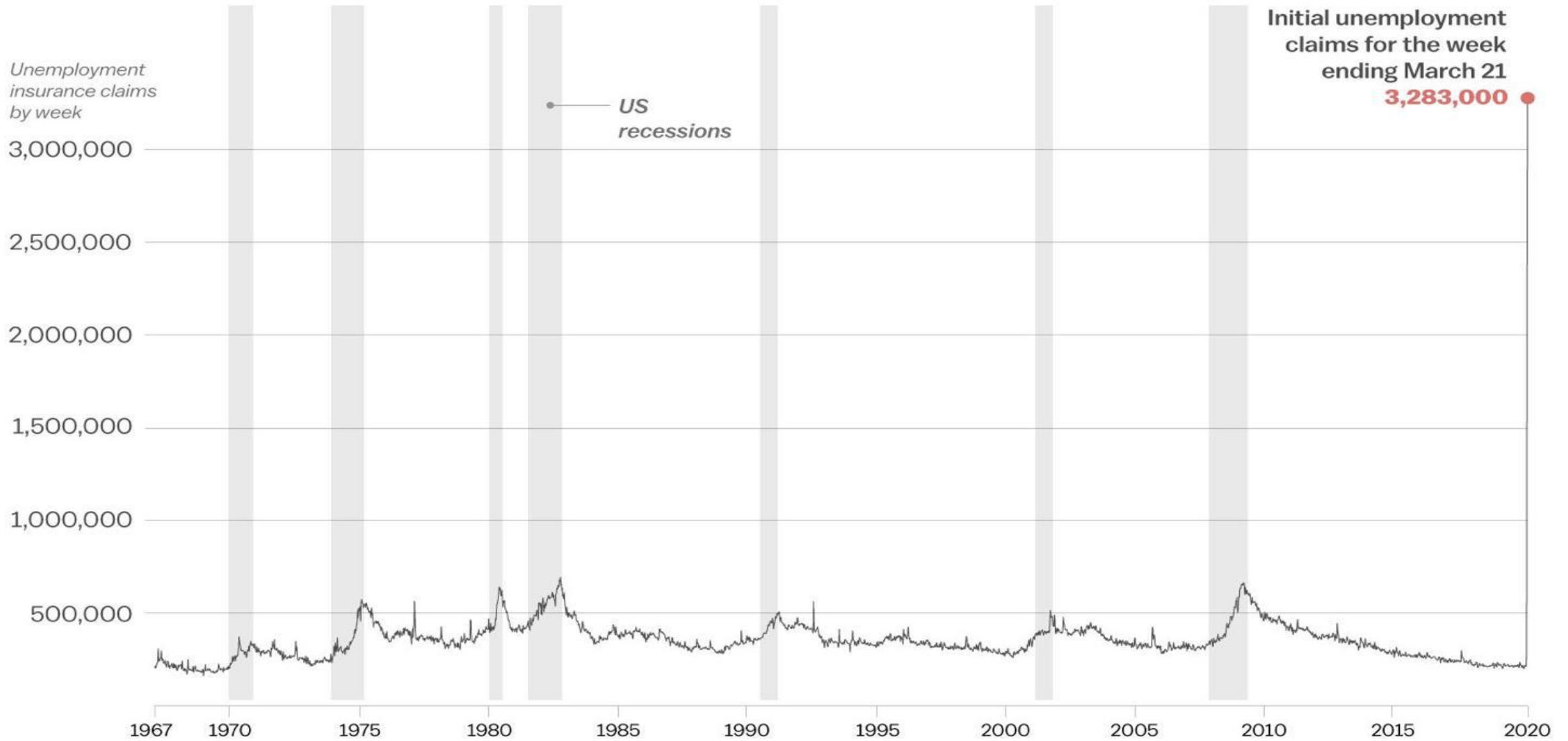
Source: OECD

# Demand Disruptions: Consumption Patterns Changed



▲ Tesco in Colney Hatch, north London, on Saturday morning. One shop ransacked 'like there's been a riot'. Photograph: Michelle Davies

# An unprecedented rise in unemployment



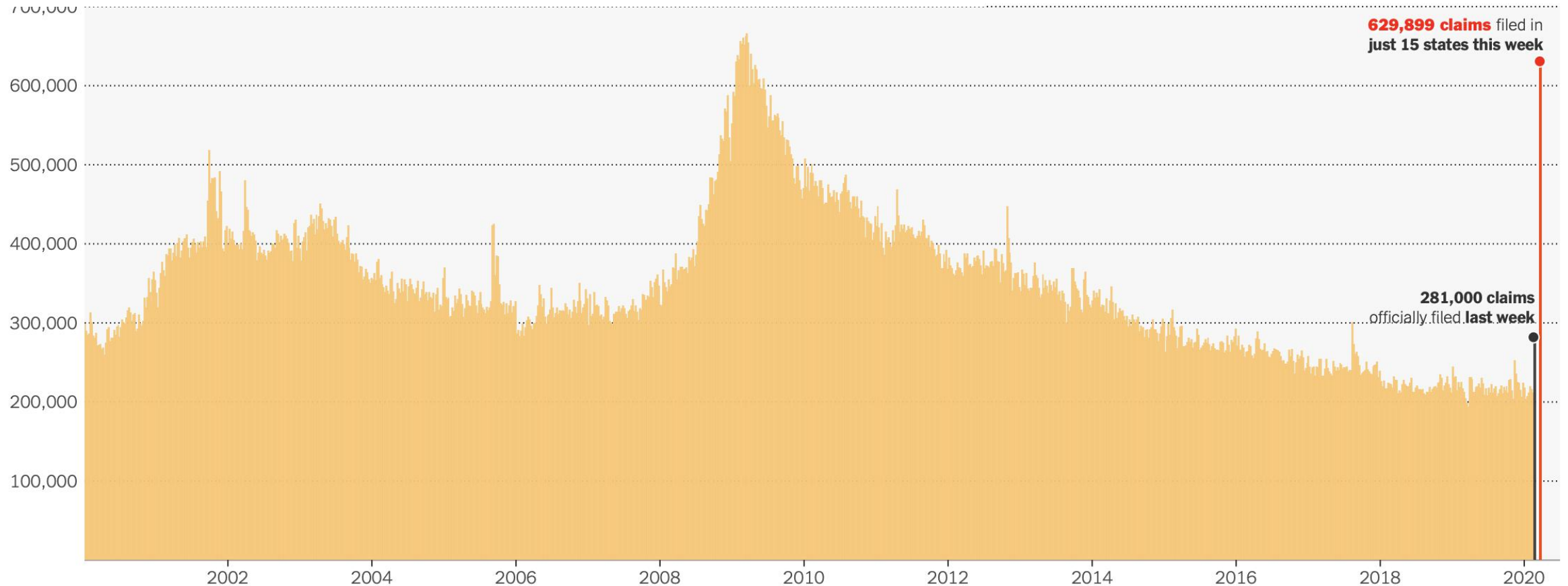
Source: US Employment and Training Administration

Christina Animashaun/Vox

**Vox**

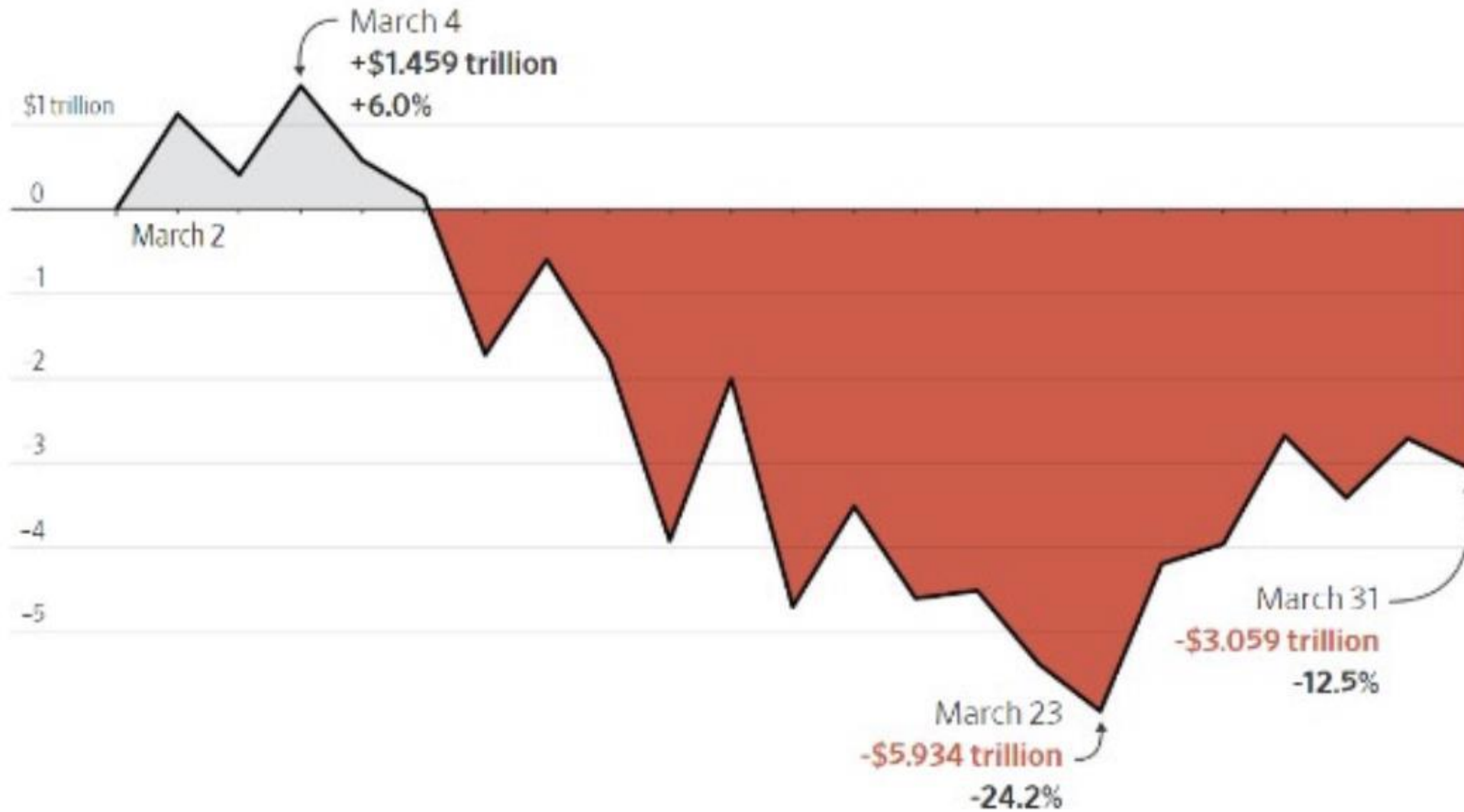
# The Staggering Rise in Jobless Claims This Week

By Quoctrung Bui and Justin Wolfers March 19, 2020



Note: Official figures are seasonally adjusted. This week's claims are not seasonally adjusted and represent a third of total national employment. Source: Department of Labor, state level reporting.

### S&P 500 market capitalization, change from February

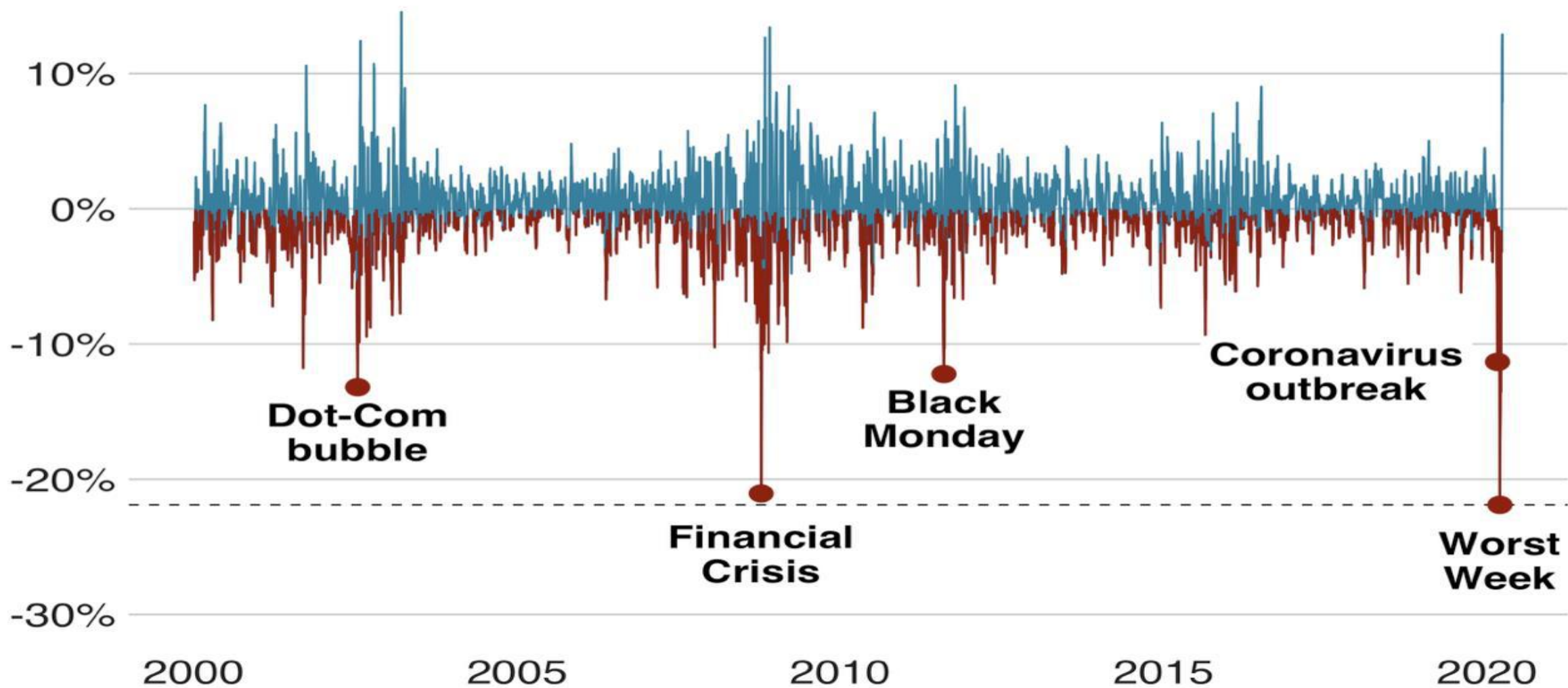


Source: FactSet



# FTSE 100 plunges on coronavirus fears

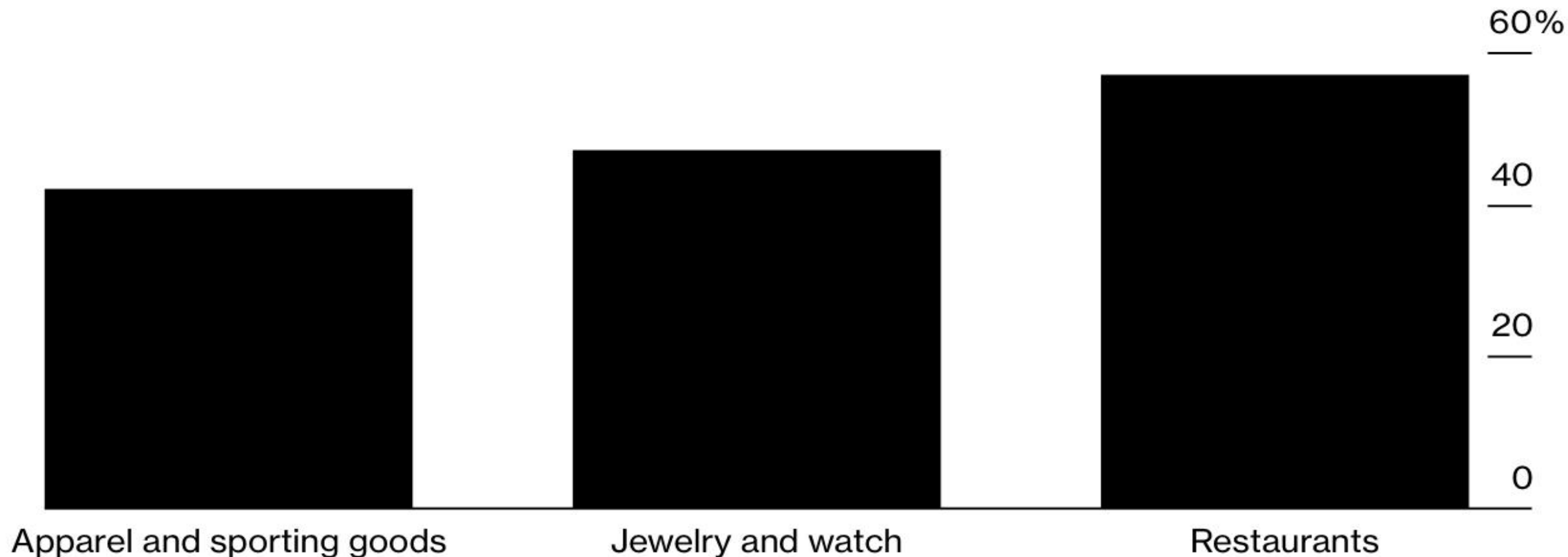
Week-on-week percentage change



# Running Out of Cash

About half of listed Chinese retailers are at risks of shutdown in 6 months

■ Percentage of companies without enough cash to cover major operating costs for more than 6 months



Sources: Bloomberg, company statements

Note: cash flow condition is measured by cash and cash equivalent; major operating costs mainly include labor and rental costs

WHAT SHOULD  
I DO NEXT?



A group of people in a meeting, blurred in the background.

**Gather Data -**

**Make Assessments -**

**Think like an ecosystem**

**Act Quickly & Decisively -**

**Make the Tough Calls**

# The Stockdale Paradox

Retain faith that  
you will prevail in  
the end,  
regardless of the  
difficulties.

AND at the  
same time

Confront the  
most brutal facts  
of your current  
reality, whatever  
they may be.

--Jim Collins, Good to Great



# The Tears in the Deep Tiers

**BY YOSSI SHEFFI**

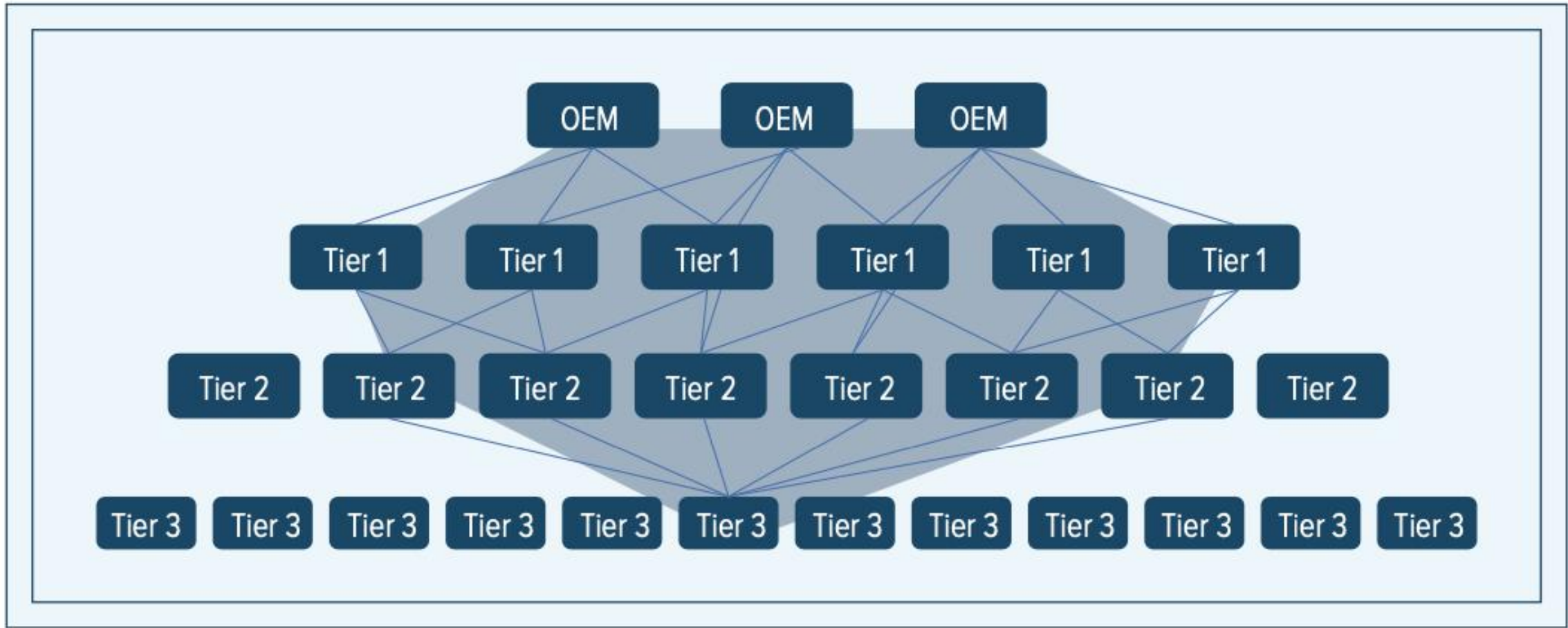
Many leading companies have well-developed risk management and crisis management systems for their operations. Yet for all their

supply chains and the actions which companies can take in response to them to achieve deep resilience.

Q. March 31, 2012. [View full slide here](#)

# The Tears in the Deep Tiers

BY YOSSI SHEFFI



# Managing New Product Development and Supply Chain Risks: The Boeing 787 Case

**Christopher S. Tang  
and Joshua D. Zimmerman<sup>1</sup>**

UCLA Anderson School  
ctang@anderson.ucla.edu  
joshua.zimmerman.2009@anderson.ucla.edu

Commented by

**James I. Nelson M.S.**

MBCP, CORP  
Business Continuity Services

To stimulate revenue growth and market response, Boeing decided to develop the 787 Dreamliner. The 787 Dreamliner is not only a revolutionary aircraft, but it also utilizes an unconventional supply chain intended to drastically reduce development cost and time. However, despite significant management efforts and capital investment, Boeing is currently facing a series of delays in its schedule for the maiden flight and plane delivery to customers. This paper analyzes Boeing's rationale for the 787's unconventional supply chain, describes Boeing's challenges for managing this supply chain, and highlights some key lessons for other manufacturers to consider when designing their supply chains for new product development.

*Acknowledgments:*

*We would like to thank William Schmidt of the Harvard Business School and one anonymous reviewer for their constructive comments on an earlier version of this paper.*

## Introduction

Since the U.S. government deregulated air travel in 1977, more airlines have entered the market causing fierce

the passenger cabin, offering substantial improvement to the flying experience. Also, the lightweight composite materials enable the Dreamliner to take long-haul flights. Consequently, the Dreamliner allows airlines to offer

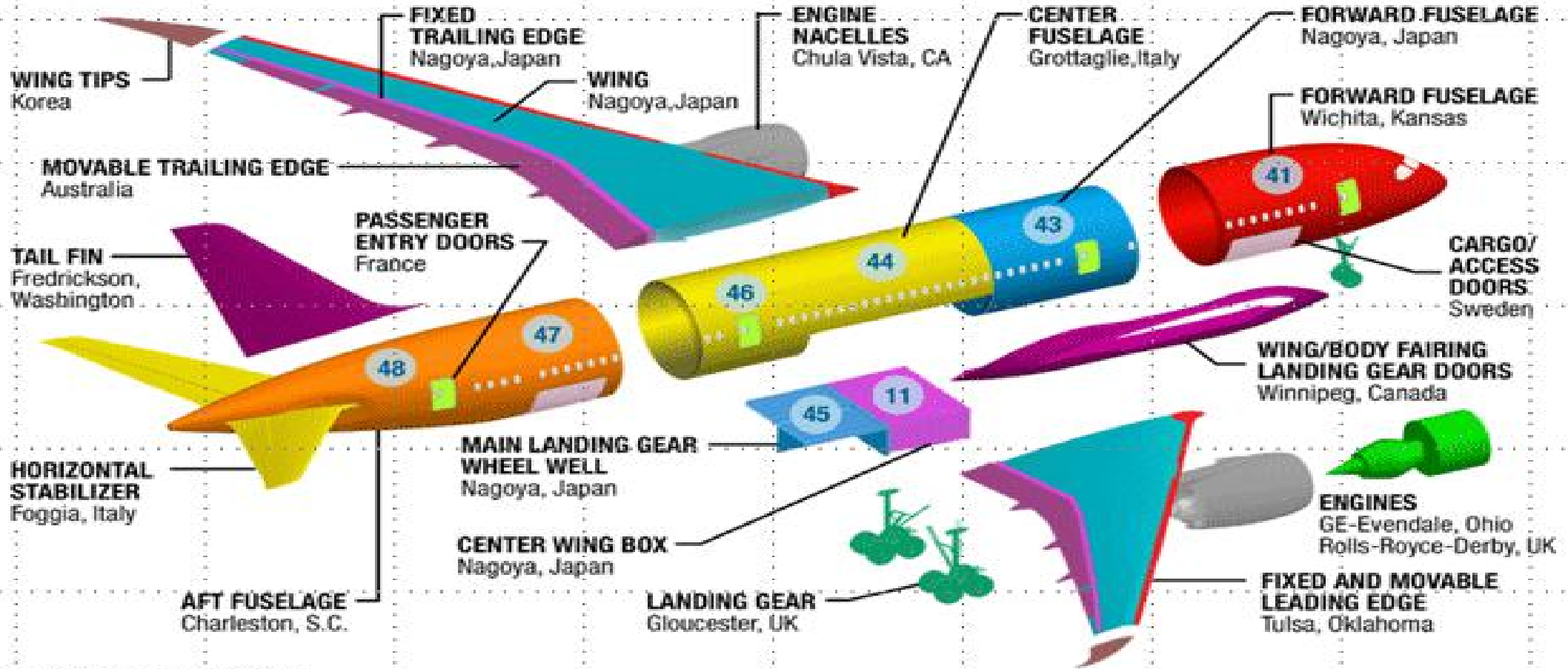


# Partners Across The Globe Are Bringing The 787 Together

787 DREAMLINER

## THE COMPANIES

U.S.	CANADA	AUSTRALIA	JAPAN	KOREA	EUROPE
Boeing	Boeing	Boeing	Kawasaki	KAL-ASD	Messier-Dowty
Spirit	Messier-Dowty		Mitsubishi		Rolls-Royce
Vought			Fuji		Latecoere
GE					Alenia
Goodrich					Saab





# Supply chain lessons from the catastrophic natural disaster in Japan

YoungWon Park<sup>a</sup>, Paul Hong<sup>b,\*</sup>, James Jungbae Roh<sup>c</sup>

<sup>a</sup>Waseda Institute for Advanced Study, Waseda University, Japan

<sup>b</sup>College of Business & Innovation, University of Toledo, Toledo, OH 43606, U.S.A.

<sup>c</sup>William G. Rohrer College of Business, Rowan University, NJ 08028, U.S.A.

## KEYWORDS

Global supply chain;  
Supply chain design  
information;  
Business continuity  
planning;  
Supply chain  
portability;  
Supply chain  
dispersion;  
Japanese  
manufacturing;  
Supply chain

**Abstract** While supply chain management has been approached from a variety of perspectives, the role of the global supply chain as a mechanism to overcome severe supply chain disruptions has not been explored adequately. This article discusses the ways in which Japanese manufacturing firms have responded to the recent earthquake, tsunami, and nuclear disaster. Based on case studies of Japanese manufacturing firms, this article presents a discussion of the supply chain restoration process after severe natural disasters and humanitarian disruptions, and reflects on supply chain lessons in terms of disaster planning and recovery responses. The critical capabilities of supply chain information design, portability, and dispersion are discussed.

# 2012 Kelley School of Business, Indiana University. Published by Elsevier Inc. All rights reserved.



# How should we respond?



How to live long enough to live?

# How should we respond?

This is something new—  
no playbook

How to live long enough to live?

# Brands named and shamed over cancelled orders

Published: 31 March 2020

Bangladesh Apparel Order cancellations



Source: CGWR/WRC's calculations based on BGMEA data as of March 29, 2020.

Cancelled and delayed orders, in US\$ millions, according to the Centre for Global Workers' Rights.

# How should we respond?

The entire supply chain  
has to survive together –  
this is not survival of the fittest...

**How do fire ants form giant rafts  
to survive floods?**

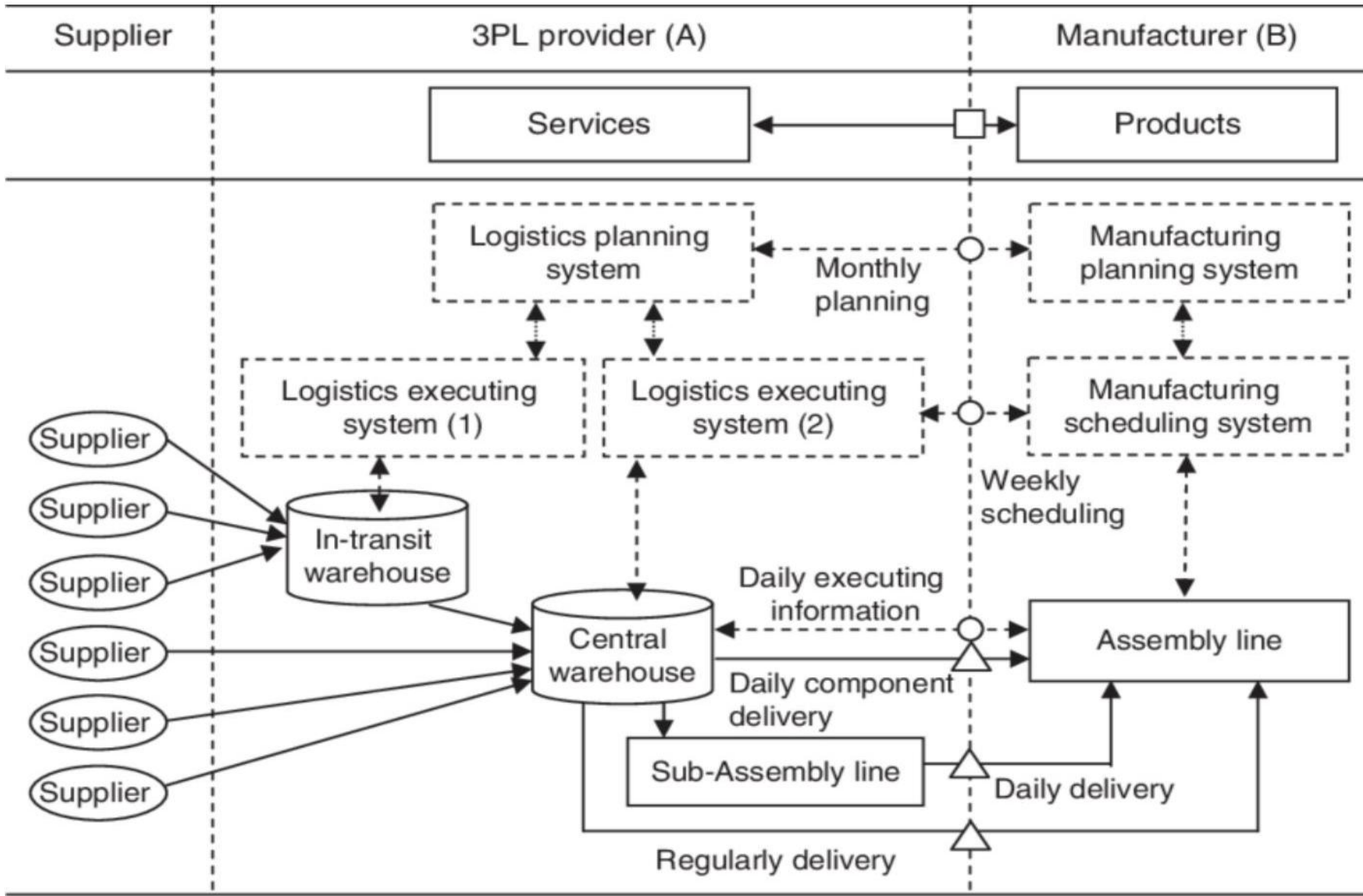
# How should we respond?



We're in this together – Think like an Ecosystem

**How do fire ants form giant rafts to survive floods?**



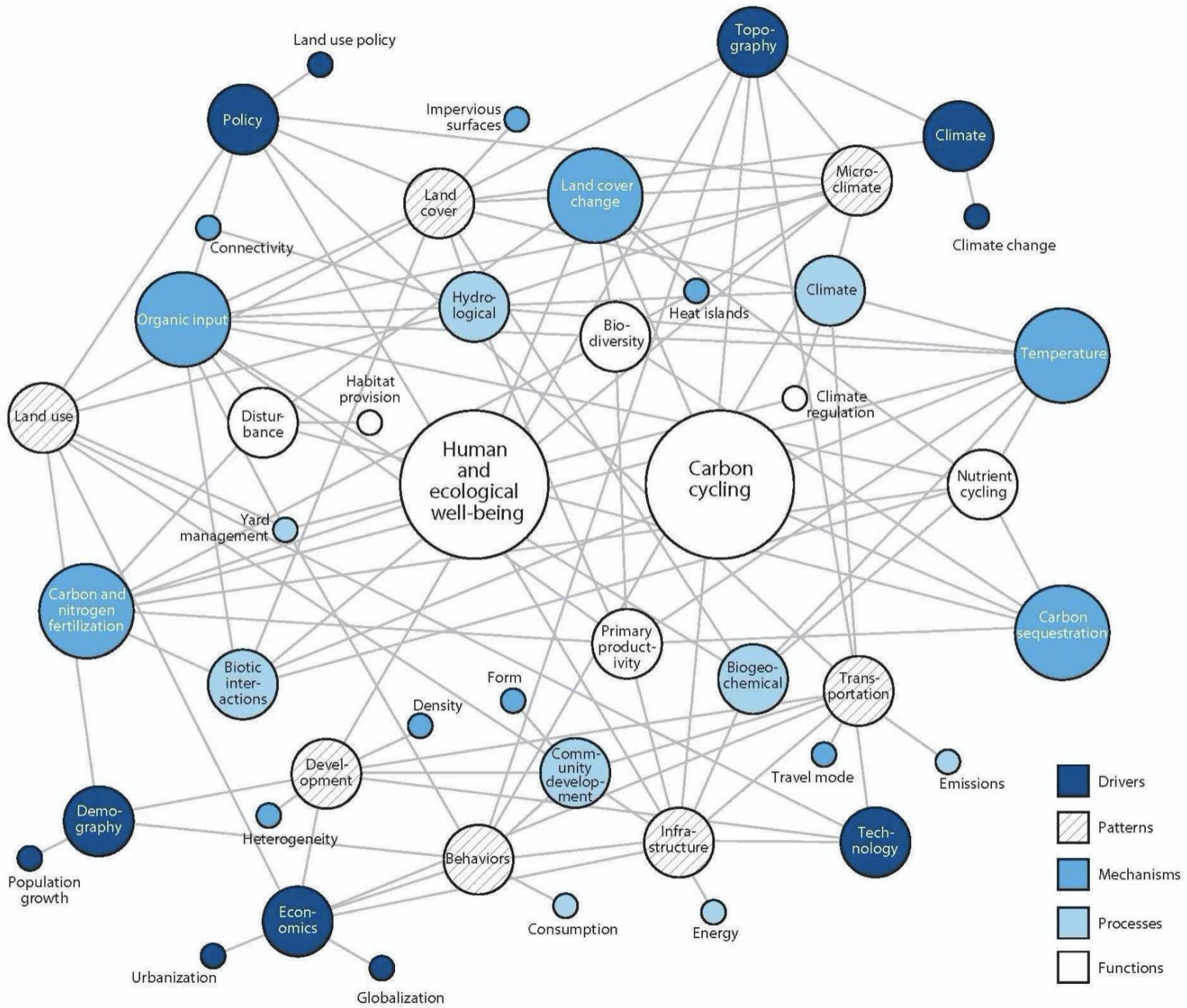


————→ Physical Flow      ◄-----► Information Flow

□ Design Interface    △ Process Interface    ○ Information Interface



Supply chain mapping of the logistics/manufacturing interfaces



The complex "network structure" of natural and human interactions in urban ecosystems.

# CONFRONT THE BRUTAL FACTS



## FACTS + FAITH

Have strong faith yet confront facts of your current reality

## Death rate of COVID-19 patients with preexisting conditions

Death rate

12%

10%

8%

6%

4%

2%

0

**10.5%**

**7.3%**

**6.3%**

**6%**

**5.6%**

**0.9%**

Heart disease

Diabetes

Chronic respiratory disease

High blood pressure

Cancer

None

Source: Chinese Center for Disease Control and Prevention

BUSINESS INSIDER

Ruobing Su/Business Insider



How should we respond?

Disproportionately



**SPEED & AGILITY**



# Global Operations in an Pandemic

Managing Supply Chains in Challenging Times



# Global Operations in an OPPORTUNITY

Managing Supply Chains in Challenging Times





# Every month, frontline health responders around the world need these supplies (and more) to protect themselves and others from #COVID19

- 89 million masks
- 30 million gowns
- 1.59 million goggles
- 76 million gloves
- 2.9 million liters hand sanitizer






#COVID19  
#coronavirus



World Health  
Organization



00:03    Explore -01:11

尚豐紗廠  
重塑未來

OPEN TO  
RE-INVENTION





N

N

BMS

OLD FACTORY  
CONTEMPORARY

676

DEFINE  
YOUR

OLD FACTORY  
NEW LIFESTYLE HUB  
舊紗廠 新地標

HISTORY / CULTURE / EXPERIENTIAL SHOPPING  
歷史 / 文化 / 體驗式購物  
© 2018 HKTDC www.hktdc.com.hk

G2G

050313  
42G3

MAX.WT	32,500	KGS
TARE.WT	71,650	LBS
PAYLOAD	3,890	KGS
CU.CAP.	8,087	LBS
	28,610	KGS
	63,050	LBS
	76.4	CU-M
	2,598	CU-FT

alt: a new cycle

HKRITA  
FOUNDATION  
NY/VETEX  
π





# CoVent, the portable ventilator designed by Dyson in 10 days

Dyson designed and put into production a ventilation machine to support the fight against the Covid-19.





H&M



HELPS  
WORKERS

WHO ELSE FOLLOWS?





New Balance

193,598 followers

17h • 🌐

+ Follow

All hands on deck. Our U.S. factories are working to develop, manufacture and deliver facial masks to the hospital community. [#communitymondays](#)

[#nbgivesback](#)

Made shoes yesterday.  
Making masks today.





**New Balance**

193,598 followers

17h •

[+ Follow](#)

All hands on deck. Our U.S. factories are working to develop, manufacture and deliver facial masks to the hospital community. [#communitymondays](#)

[#nbgivesback](#)

3,018 · 57 Comments



Like



Comment



Share

Most Relevant ▼



Add a comment...



APPAREL: DESIGN\*PRODUCT DEVELOPMENT\*PRODUCTION\* SOUR... 14h ...

Awesome!

**New Balance** every one will remember you when purchasing their next product as these are the organizations that we want to contribute to as **New Balance** is helping our nation!!

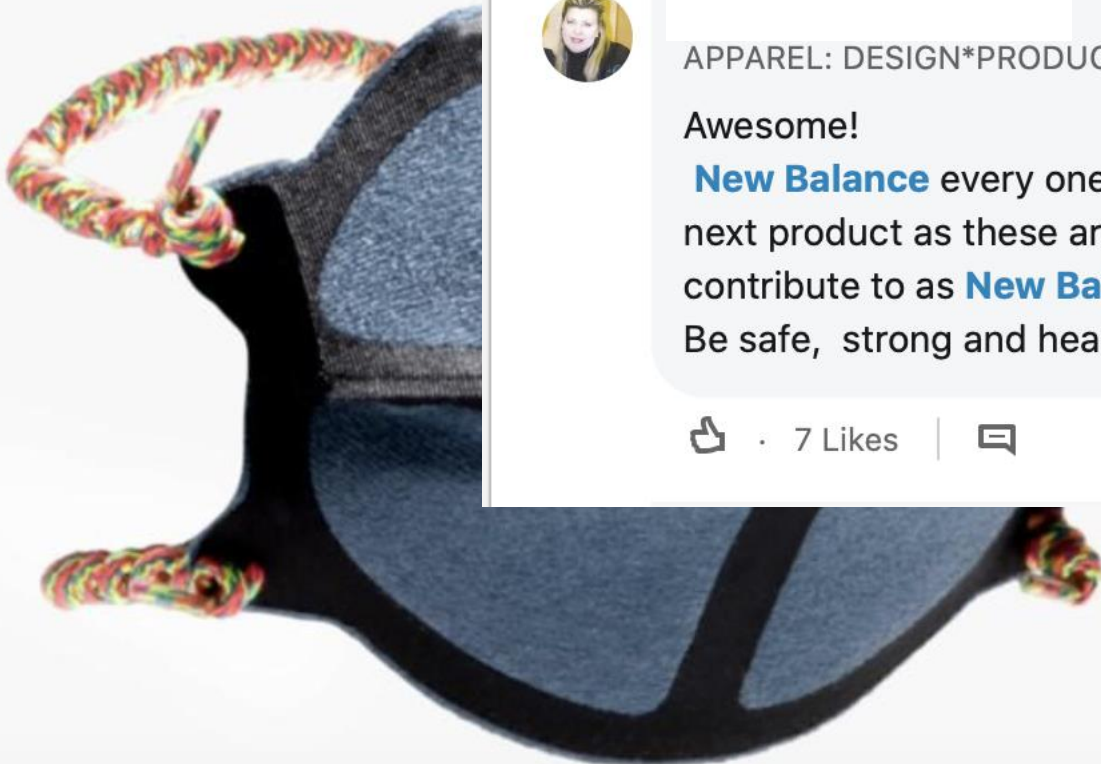
Be safe, strong and healthy!



7 Likes



Made s  
Making





**It's not what happens to you,  
but how you react to it that  
matters.**

Epictetus



香港紡織及成衣研發中心  
The Hong Kong Research Institute of  
Textiles and Apparel