Impact of Covid-19 Crisis on Logistics Systems and Supply Chains

Professor Alan McKinnon

*Kühne Logistics University*

Hamburg

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What has happened over the past month?

Recognition that crisis will be longer, deeper and more transformational than expected

Lock-downs have drastically reduced the level of economic activity

Greater uncertainty about rate and nature of economic recovery

As rate of infection and deaths have peaked and are in decline in some countries, attention is shifting from the medical emergency to the economic recovery

Public profile of logistics and supply chain management has continued to rise:

- Overcoming public ‘freight blindness’ problem? bit.ly/2RRud6j
- UK government: Covid medical deliveries = ‘biggest logistical challenge of peacetime’
Why were companies’ supply chains not adequately prepared to deal with Covid19 crisis?

No Shortage of Literature / Advice on Supply Chain Risk and Resilience

Journal papers on supply chain resilience

Supply chain contingency planning is not prepared for such an extreme event

Covid19

Probability of disruption

High impact

High probability

Low impact

Low probability

Impact on supply chain
Why have governments not been adequately prepared to deal with Covid19 crisis?

UK Cygnus Exercise (Oct 2016): predicted serious shortages of ICU beds, ventilators and PPE

“There has been a reluctance to put Cygnus out in the public domain because frankly it would terrify people,” said the former senior government source yesterday. Daily Telegraph 28 April 2020
Trucking operations sometimes considered to be a ‘pandemic vector’ – spreading disease.

In coronavirus crisis, truck drivers are being classed as essential workers.

Critical dependence on home delivery staff – many with insecure jobs in the Gig Economy.

Crisis is likely accelerate the switch to online retailing, increasing reliance on these jobs.

What has been the impact Covid19 on the logistics work-force?

Is the pandemic likely to accelerate the automation/digitalisation of logistics processes?

Freight forwarders able to switch office work to remote working at competitive advantage.
How big an impact has the coronavirus crisis had on freight traffic levels?

‘almost half of the UK’s lorries are parked up because of a plunge in demand’ *(Financial Times, 12 April 2020)*

Traffic levels in England (based on video monitoring)

Index: average for same day of the week over previous six weeks = 100

- Large HGVs
- Buses
- Vans
- Cyclists
- Cars
- Pedestrians


Average truck speed higher through major bottlenecks in US highway network due mainly to large reduction in car commuter traffic

50-55% running normally

95% drop in passenger traffic

Allowing longer, heavier and faster freight trains
What has been the impact on the cross-border movement of freight in Europe?

Financial Times 17-3-2020

Flow of goods slows as Poland tightens borders

Guidelines for border management measures to protect health and ensure the availability of goods and essential services

Border ‘green lanes’ for trucks

Border delays for trucks – 29 April 2020

France to Switzerland

*Saint Louis / Basel crossing*

2 hour delay

Slovakia to Hungary

*Ratja / Bratislava crossing*

1 hour delay

Romania to Hungary

*Biharkeresztes / Oradea crossing*

3 hour delay


To what extent is the crisis threatening the financial viability of logistics businesses?

Pre-Covid 2-3% profit margins typical across EU road haulage sector

38% of 2000 larger UK road haulage businesses in financially ‘cautious or dangerous state’, 28% of 318 larger German trucking companies in similar state (Plimsoll, 2019)

Richard Burnett, head of UK Road Haulage Association ‘We’re seeing cash flow run out. Hauliers have reached a tipping point.’ ‘Sector needs a cash injection of £4bn to survive.’ (FT 11-4-2020) ‘40% of haulage businesses will only survive another month of lockdown’

State of freight transport sector is a ‘barometer’ of economic activity

![Graph showing the relationship between tonne-kilometre (tkm) and Gross Domestic Product (GDP) for EU. EU tonne-km = 0.95 x EU GDP. Source: Eurostat]
Will Covid-19 help us to reach our climate change targets for logistics?

How COVID-19 might help us win the fight against climate change

Thinking ahead: For a sustainable recovery from COVID-19 (Coronavirus)

Addressing climate change in a post-pandemic world

The Analogy Between Covid-19 and Climate Change Is Eerily Precise

Our approach to covid-19 can also help tackle climate change

Supply Chains in the Time of Corona
Will Covid19 help us to reach our climate change targets for logistics?

One year reduction of 5% in CO₂ emissions would only cut increase in average global temperature by 2100 by **1-2 hundreds of a degree centigrade**

Dr Zeke Hausfather (Breakthrough Institute)

*BBC Radio 4 (More or Less 29-4-2020)*

Even if sustained longer-term Covid19 rate of CO₂ reduction would not keep us within 1.5°C carbon budget by 2030.

By how much have logistics emissions been reduced by the Covid crisis?

Logistics = 10-11% of CO₂ emissions and rising

one-off deep reduction in logistics-related emissions – resetting the CO₂ baseline

Daily CO₂ emissions as % of normal for EU27

post-Covid economic recovery scenarios

pre-lockdown

with Coronavirus restrictions

-37%

goods vehicles

supply chain restructuring

localised sourcing

relaxing JIT pressures

public policy instruments

linking support to emissions

ending fossil fuel subsidies

acceleration of trends

digitalisation, online retailing, circularity, 3DP

limited resources for green investment by government and business

logistics decarbonisation given low priority by businesses

A test of the commitment to the EU’s New Green Deal

Source: SIA Partners / Financial Times 8-4-2020
Where are the main logistics bottlenecks in the coronavirus crisis?

**Lack of storage space for excess oil**
- Global oil storage full in 3-4 weeks (Goldman Sachs 24-4-2020)
- Lack of warehousing space
  - UK could run out of space in 2 weeks (UK Warehousing Association, 20 April 2020)
  - 90% of 3rd party warehouse operators - full 1.5 million available slots
    - 750,000 imported pallet-loads /week

**Air cargo ‘capacity crunch’** (IATA April 2020)
- March 2020 data
  - cargo tonne-kms down -15%
  - capacity down -23%
  - bellyhold capacity down -44%

Constrained by:
- charter permits
- quarantine exemptions
- availability of ground staff

How likely is it that the coronavirus crisis will:

- reverse globalisation
- promoting reshoring / nearshoring of production
- force a relaxation of the just-in-time principle
- increase inventory levels
- encourage more diversified sourcing
- increase supply chain agility

Rapid diversification of production in response to medical needs
- emergency re-orientation of supply chains – lessons in agility for the future

In lockdown switch from *eating-out to eating-in* creating a major food logistics challenge

Diverting inventory intended for restaurants to supermarkets and home delivery – to meet demand and minimise food waste
What logistics trends are likely to be reinforced / accelerated and which ones reversed?

Supply Chain and Transport

- Digital transformation of supply chains
- Restructuring global value chains
- Supply chain sustainability
- Logistics skill shortages
- Logistics property and infrastructure
- Reduced risk / increased resilience
- Ecommerce-driven demand chains
- Supply chain collaboration

World Economic Forum / KLU

https://www.weforum.org/platforms
Professor Alan McKinnon

Kühne Logistics University – the KLU
Wissenschaftliche Hochschule für Logistik und Unternehmensführung
Grosser Grasbrook 17
20457 Hamburg

tel.: +49 40 328707–271
fax: +49 40 328707–109

e–mail: Alan.McKinnon@the-klu.org
website: www.the-klu.org
 www.alanmckinnon.co.uk

@alancmckinnon

Impact of Covid19 on logistics and supply chains - issues and information sources