

# Value Chain Resilience in a Context of Uncertainty

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CBS Week van de Globalisering:

Session: "Caught in the Middle. The Netherlands in a world of Growing Global Protectionism"

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2010 = 100

70

60

Jan 2000 Jan

2002

Jan

2004

### The World Pre-COVID, Post-GFC

### Global merchandise trade up to 2020

# Advanced economies - Exports Emerging economies - Exports World - Exports Japan Tsunami Japan Tsunami

Jan

2010

Global Financial

Crisis

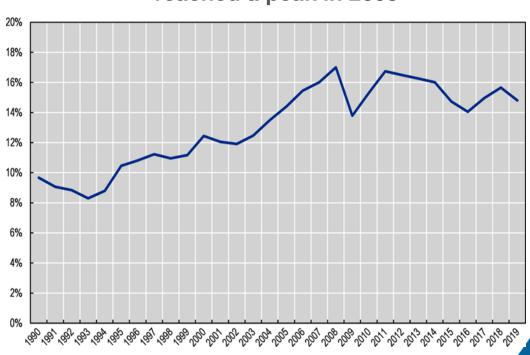
Jan

2008

Jan

2006

### The import intensity of production reached a peak in 2008



Source: CPB World Trade Monitor; OECD. The ratio indicates the value of trade in intermediate goods and services as a percentage of gross output.

Jan

2016

Jan

2018

Jan

2014

Jan

2012



### THE COVID-19 CRISIS

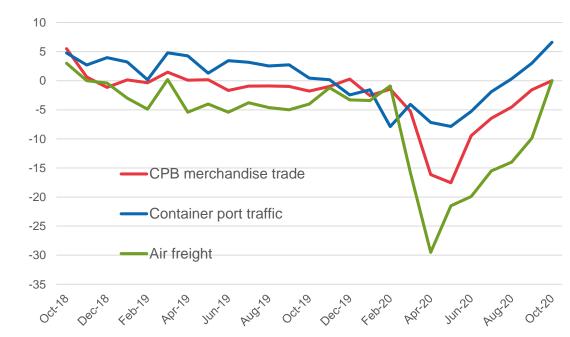




### The hit has been hard and recovery will be slow

### Trade indicators show a steep drop and a tepid recovery

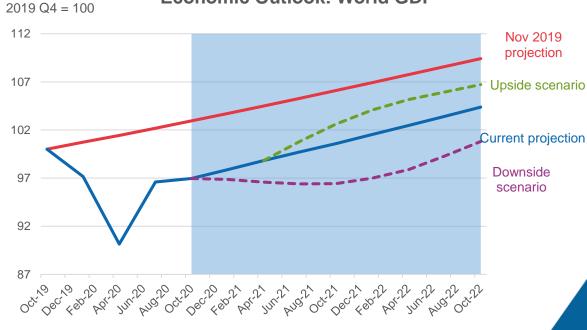
y-o-y % changes Global merchandise trade indicators



Source: CPB; IATA; RWI/ISL Container Throughput Index; and OECD calculations

### GDP projections for next year show a fragile recovery and heavy losses

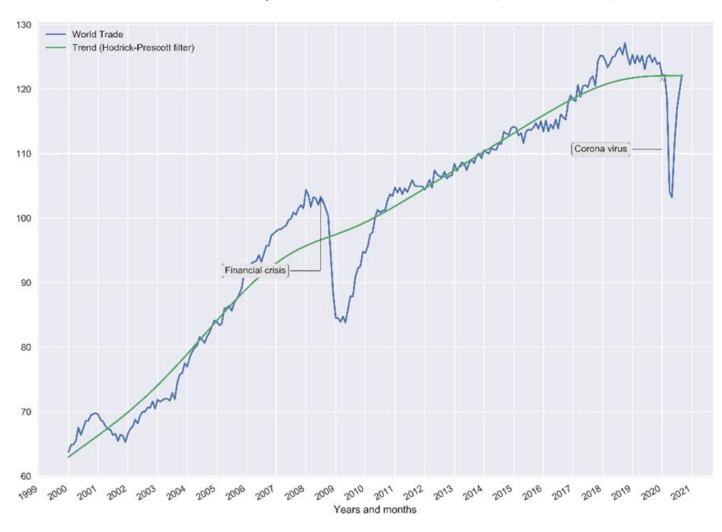




Source: OECD Economic Outlook December 2020

# World trade is continuing its sharp rebound in the second half of 2020 but remains about 5% below its 2019 level.

Level/trend decomposition of world trade (2010 = 100)





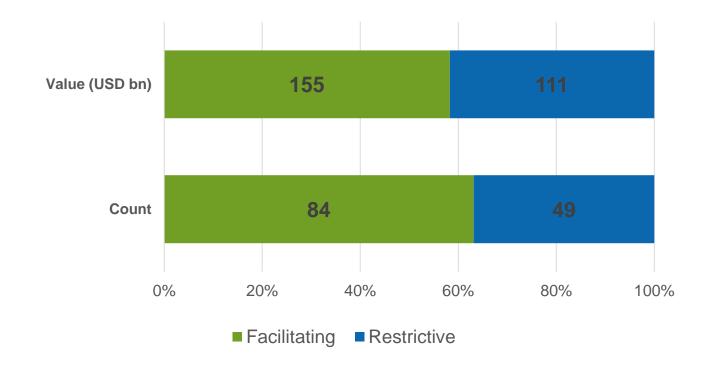
### **TRADE POLICY RESPONSES IN 2020**



## **>>**

# Governments reacted with trade restrictions but also facilitation

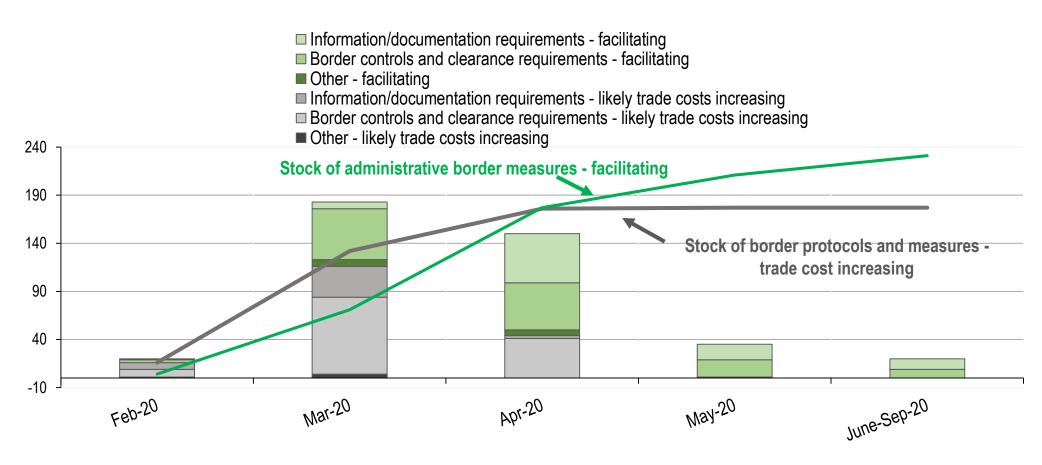
### G20 COVID trade measures until mid-October





### **>>**

### By April trade facilitation outweighed restrictions



Source: OECD



### **G20 Trade Ministers**

- Met three times in 2020
- " any emergency trade measures designed to tackle COVID-19, if deemed necessary, are targeted, proportionate, transparent, temporary"





# TRADE AND POLICY LANDSCAPE IN 2021 (AND BEYOND?)

# Trade and Policy landscape in 2021 (and beyond?)

Regions/countries are recovering at different pace

Widespread policy discussions about need to strengthen resilience of value chains

EU trade and investment policy (caught in the middle or bridge builder?)



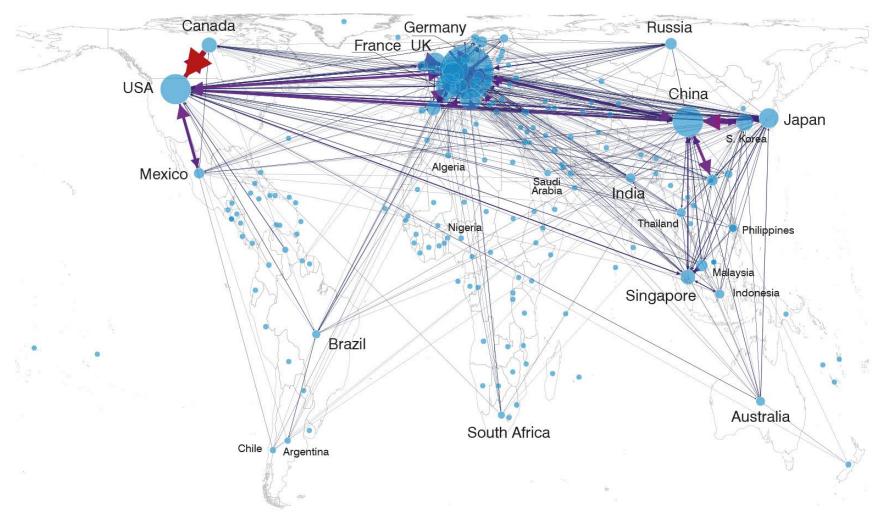


Regions/countries are recovering at different pace





### Where are value chains active?







### **COVID** shock on Dutch supply chains

#### PROJECTED SUPPLY CHAIN EXPORT LOSS, by sector

MOST AFFECTED SECTORS	SECTOR CHARACTERISTICS, 2019			EXPECTED LOSS: Exports of industrial inputs, 2020						
	Export	SME presence	Women employment	-	Total export loss to the G3	to China	/	to the European Union	\	to the United States
Plastics & rubber	29 441			6%	1 858	77		1 703		78
Chemicals	45 160			4%	1 837	52		1 662		124
Machinery	64 652			2%	1 393	114		1 196		83
Electronic equipment	84 470			1%	1 194	35		1 134		25
Ferrous metals	11 018			7%	754	9		718		27
Other subsectors	311 696			1%	3 707	136	$\setminus$	3 412	/	160
Total	546 437			2%	10 744	423	Γ	9 825		496

rerage. Red dot: share below the average. Blank cells: data is not available or not applicable.

#### PROJECTED SUPPLY CHAIN IMPORT LOSS, by sector

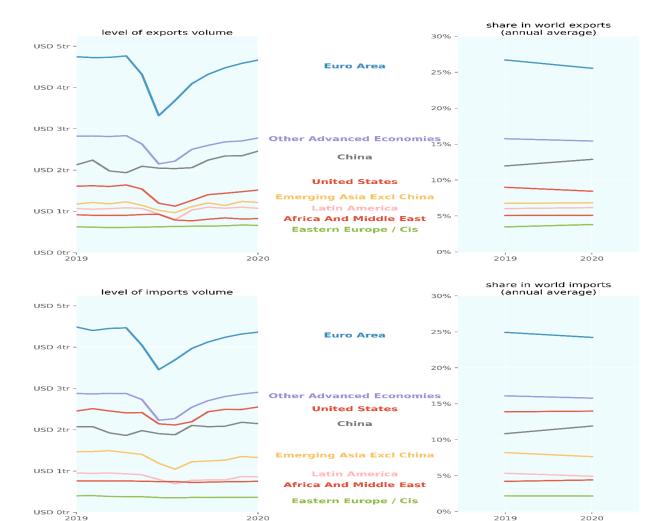
	SECTOR CHARACTERISTICS, 2019			EXPECTED LOSS: Imports of industrial inputs, 2026					
MOST AFFECTED SECTORS	Required imported inputs	SME presence	Women employment	Total import lo	ss from the G3	from China	from the European Union	from the United States	
Electronic equipment	15 596			12%	1 928	716	1 050	162	
Machinery	13 217			13%	1 723	306	1 280	138	
Motor vehicles & parts	7 061			14%	956	108	792	56	
Chemicals	7 135			13%	943	120	718	106	
Plastics & rubber	6 882			14%	938	103	721	114	
Other subsectors	21 518			13%	2 749	483	1 988	278	
Total	71 410			13%	9 237	1 835	6 548	853	

All figures are in \$ million, unless specified otherwise. Green dot: share above the average. Red dot: share below the average. Blank cells: data is not available or not applicable.

Source: International Trade Centre, SME Competitiveness Outlook, figures in USD millions

### Regions/countries are recovering at different pace

#### World trade 2019-11 to 2020-10



Source: CPB World Trade Monitor, OECD calculations

China's share in world exports climbed from 12% in 2019 to 13% in 2020 (up to October), and that of imports from 11% to 12% in 2020.

China also reported a record trade surplus of USD 75.43 billion in November





Widespread policy discussions about need to strengthen resilience of value chains





### Build resilience of supply chains for "essential" goods







### The value chain level: Complexity

### The face mask value chains and its main bottlenecks during COVID-19

Raw materials

Processed inputs 1

Processed inputs 2

Assembly line

Sterilisation

Testing and packaging

Distribution

Petroleum oil Metal Paper pulp (Cotton)

Polypropylene Nylon spandex Aluminium Galvanised iron or steel Cardboard

Nonwoven fabric Metal strips Ear loops Boxes for packaging (Other fabric)

[Ultrasonic] welding]

> While ultrasonic welding is used in a variety of industries, assembly lines for face masks are very specific and were in shortage. Other machines can be used but requiring some adjustments

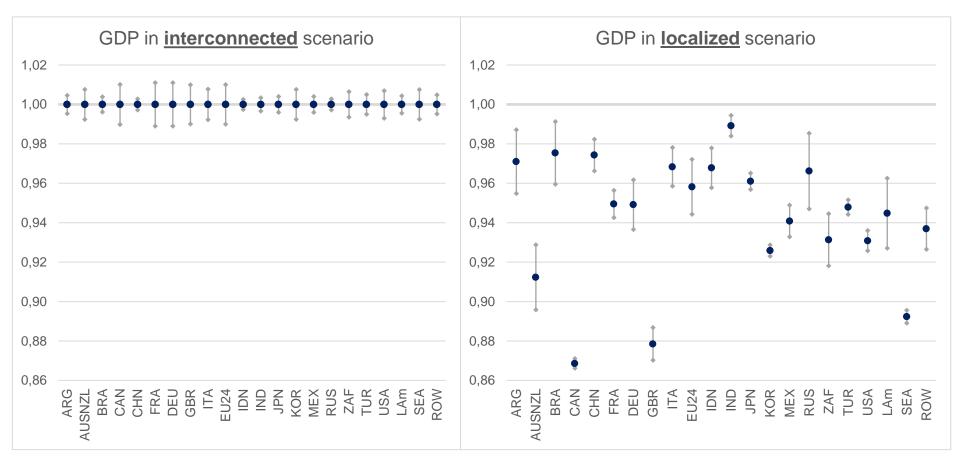
Most countries manufacturing face masks have put in place export bans or equivalent measures. Distribution was more complicated in the context of the shortage

There was a shortage of melt-blown polypropylene manufactured by a limited number of companies





### Localisation: less efficient, less stable real GDP

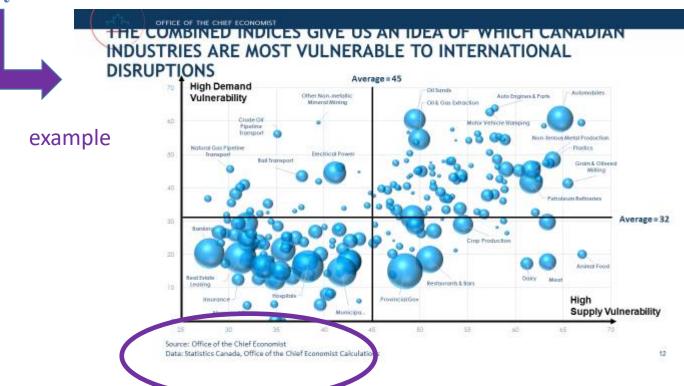


Source: Shocks, risks and global value chains: insights from the OECD METRO model by OECD, (OECD, 2020)

### Hitting the right middle ground?

Tools and approaches to build resilience in global supply chains

- 1. Determine government policy objectives
  - a) Determine situations where government involvement might be required
  - b) Identify and diagnose possible shocks
- 2. Identify "essential" goods and assess supply chain vulnerabilities
- 3. Minimize exposure to shocks
- 4. Ensure resilient response capacity



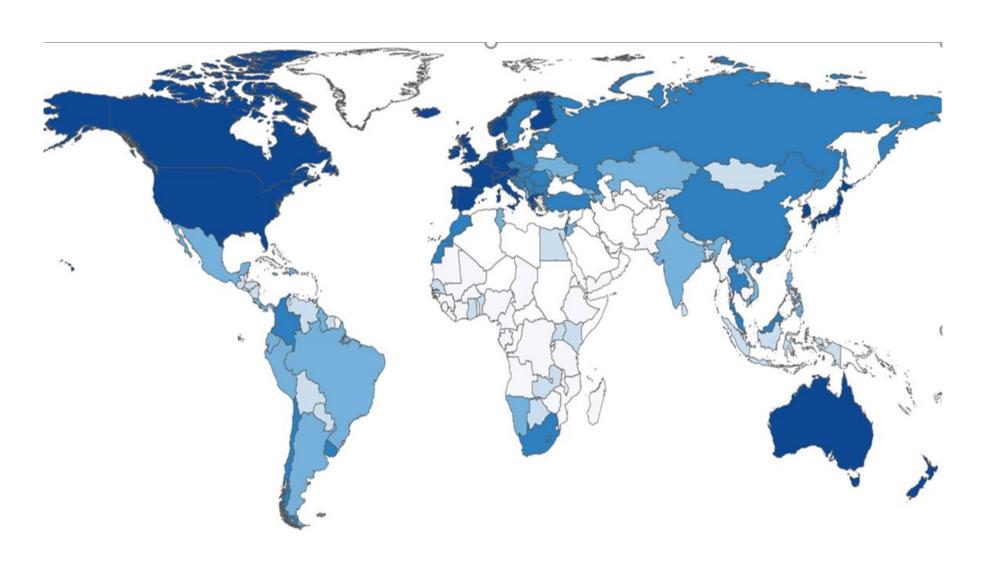




### Possible ingredients

Unilateral	International
<ul> <li>Streamlined (digital) border processes</li> <li>Stress tests and risk assessment of value chains (with private sector):</li> <li>Diversification of suppliers?</li> <li>Strategic stocks?</li> <li>Agreements to repurpose production facilities in terms of crisis</li> </ul>	<ul> <li>Commitment to avoid trade restrictions (e.g.: Joint ministerial statement by Australia, Brunei Darussalam, Canada, Chile, the Republic of the Union of Myanmar, New Zealand and Singapore)</li> <li>Permanent market information systems (e.g. AMIS)</li> <li>Co-ordination in certification</li> </ul>

### The future of value chains?





# Contact us We look forward to hearing from you!



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