China's strategic relevance to the port of Rotterdam

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Clingendael Report

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Contents

Summary

This report provides a clearer understanding as to whether recent (since 2019), current and expected China-related developments may threaten the **strategic position of the port of Rotterdam in terms of freight flows** and how this might play out. It comes to the following conclusions:

- **Neither Chinese companies nor the Chinese government have changed their positions towards the port of Rotterdam substantially in recent years.** Although Chinese direct investment in the EU in general declined sharply after 2017 and EU and Dutch attitudes towards China simultaneously became more critical, Chinese investments in and around the port have remained significant – and even increased: see the acquisition of KLG Europe in 2019 – and the Chinese government continues to push for good diplomatic relations with the EU and with the Netherlands.

- A (partial) **shift of ownership in the port from Hong Kong to mainland China is possible**, and would not lead to any substantial changes in geopolitical relations. On the one hand, both Hong Kong company Hutchison Port Holdings (HPH) and Chinese state-owned enterprises are primarily focused on commercial objectives. On the other hand, they have to take into account the political interests of the Chinese Communist Party.

- However, there is a **degree of differentiation** (state-owned enterprises are probably more sensitive to political pressure from Beijing than Hutchison), and especially a difference in perception on the European side. An increased share of Chinese state-owned enterprises at the expense of the Hutchison share – possibly by them taking over the PSA share in HPH – is likely to garner a degree of criticism in the media and political landscape, both in the Netherlands and at the EU level. The **potential that the share of Chinese state-owned enterprises within the totality of Chinese interests in the port (i.e. relative to Hong Kong's share) may increase in the future** should be factored in.

- **European and Dutch attitudes towards Chinese influence in European seaports have turned more negative.** Five geopolitical factors are key to this change: the US-China relationship, the EU-China relationship, the war in Ukraine, tensions between China and Taiwan, and the COVID pandemic.

- As a result, the EU and the Netherlands are looking **more critically at dependencies** on and interactions with China. In this context, the European Commission stresses the importance of de-risking and economic security, as well as revising EU-China policy. While the Commission generally takes a country-neutral approach to instruments, there are calls from the European Parliament for a 'China-centric' approach. A similar dynamic is playing out in the Netherlands between the Lower House and the current Cabinet.

- As a consequence, **legislation** is changing too, and policymakers are working on the **toolbox of instruments to enhance strategic autonomy**. Legislation focuses mainly on limiting future influence and dependencies, but this does not preclude new legislation that will affect already existing partnerships with China.

- **The importance of Chinese cargo for the port of Rotterdam and the Dutch economy has increased significantly.** Besides imports and exports, it involves transit and re-export flows. This increase is not reflected in a similar increase in the impact of Chinese activity in logistics in the Netherlands. There is a big difference between the volume of China-related deepsea container flows in the port of Rotterdam (55% share) and the degree of Chinese state-owned enterprises-related ownership in the Rotterdam container terminal infrastructure (8.2% share). If Hutchison Port Holdings is also counted as a Chinese company, this represents a 73.3% share (13.05 TEU) of Rotterdam deepsea container terminal activity owned by Chinese parties. Most container terminals are multi-user terminals.

- The increased importance of Chinese parties is particularly visible in **container handling**.

- The possibility of Chinese actors acquiring a larger share of **Europe's chemical sector** seems limited, due to commercial considerations and geopolitically-motivated restrictions. Additionally, the level of FDI from China has fallen sharply. The relevance of China for chemical activities at the port of Rotterdam is mainly related to the difference in level playing field between producing in China and the Netherlands and the fact that China is currently dumping chemical products on the world market due to lower demand at home.

- Should China impose **import restrictions** against the Netherlands in a **scenario** as discussed in this report (in retaliation for Dutch exports to Taiwan of military-relevant technology), the impact on freight flows through Rotterdam would probably **not be significant**. Expressed as port dues, the decrease would be estimated to be around 0.3 million euros (assuming 2022 revenues).

- **Should Chinese container flows be diverted** to other COSCO terminals in Europe as an additional retaliatory measure – and this is especially possible with transit flows – **the port of Rotterdam will feel it strongly** with a decrease of around 25 million euros in port dues.

- On the other hand, if **China-related freight flows are completely eliminated** (which is more likely in a major geopolitical crisis in Asia than because of targeted sanctions against the Netherlands alone), the **impact on the port of Rotterdam and port dues could be very large**.

- The extent to which Chinese companies are present in the port as investors appears to be of **relatively limited significance for the risk of lost freight flows** compared to the extent to which the Dutch economy is dependent on China.

- The **dependence on China** has increased significantly in recent years and the Dutch economy has become increasingly dependent on China without developing alternatives to it. Given the dominance of Asian cargo in the port of Rotterdam (9.9 million TEU in 2022), in a crisis situation as outlined in the second scenario in this report, container volumes would decrease by several million.

- An **alternative production infrastructure** is slowly developing in Asia, as an alternative to China. The regionalisation of strategic sectors such as batteries, electric cars and chip factories is occurring much faster. In the coming years, freight flows to and from China will gradually decline and the share of 'Altasia' (the countries surrounding China) will grow. First there will be a high proportion of products built from Chinese parts, 'Made in Altasia'.

- **China's influence in the hinterland of the port of Rotterdam is waning**, with Duisburg being the most high-profile example. This also extends to the New Silk Road (rail) and the Northern Silk Road. Russia's position in relation to the invasion of Ukraine means there are no prospects of reviving these flows in the short to medium term.

Introduction

In 2019, the Clingendael Institute published the report titled 'European Seaports and Chinese Strategic Influence: The relevance of the Maritime Silk Road for the Netherlands'.[1] Since then, several developments have taken place that affect China's significance for the port of Rotterdam, including the COVID pandemic outbreak, the Russian invasion of Ukraine, Dutch and European perceptions of China becoming more negative, and increased tensions between China and the US. This changing context has prompted a follow-up study that provides an update on China's strategic relevance to the port of Rotterdam. Whereas the focus in 2019 was on the significance of China's influence for the Netherlands as a whole, this update is specifically about the significance for the Rotterdam port area.[2]

Over the past two decades, companies based in Hong Kong and mainland China have made investments in European seaports and in sectors directly related to ports, such as sea, road and rail transport. Chinese companies (including those based in Hong Kong) operate in all larger seaports in the EU. At the port of Piraeus, Greece, COSCO has a majority stake in the port authority. In Zeebrugge, COSCO holds a stake of over 85% in the only container terminal. In other ports, China's stake is smaller. Nevertheless, China is a major player in the European port sector, due in part to Chinese shipping companies as well as China's major role as a trading partner of the EU. Political and media attention to that role, especially regarding potential risks to national security and economic competitiveness, has increased in recent years. COSCO's recent investment in a terminal at the port of Hamburg (resulting in a 24.9% stake in the terminal in question) led to much public and political debate in Germany. Since large-scale protests broke out in 2019 and a National Security Law was implemented in 2020, there is also much debate about Hong Kong's degree of autonomy as an economic entity, functioning as it does as a Special Administrative Region of China.

1 Frans-Paul van der Putten, *European seaports and Chinese strategic influence: The relevance of the Maritime Silk Road for the Netherlands*, (The Hague: Clingendael Institute, 18 December 2019).

2 The research for this report was concluded in August 2023.

The aim of this report is to provide a clearer understanding as to whether recent (since 2019), current and expected China-related developments may threaten the strategic position of the port of Rotterdam in terms of freight flows and how this might play out.

The report comprises four sections covering the following topics, respectively:
1. Changes in Chinese government policy and Chinese corporate strategies towards European seaports, and specifically the Rotterdam port area (foreland, hub function and hinterland).
2. Changing attitudes of European governments towards Chinese influence in European seaports, especially in the Rotterdam port area, due to geopolitical factors (influence of the war in Ukraine and US-China rivalry).
3. (Potentially) changing ownership ratios of port users leading to a different role or degree of influence of Chinese actors.
4. Changing freight flows due to evolving trade relations between China and Europe, including flows related to the China-Europe rail link and to the Northern China-Europe shipping route.

The terms 'China' and 'Chinese' in this report refer to the People's Republic of China including Hong Kong, which has Special Administrative Region (SAR) status. 'Mainland China' refers to the People's Republic of China excluding Hong Kong and Macao (also a SAR). Taiwan is considered part of the People's Republic of China by China's central government, but Taiwan's government, which functions autonomously from the People's Republic, rejects that view.

1 Positioning of Chinese companies and government towards the Port of Rotterdam

Summary

- *This section provides an overview of **major Chinese companies of relevance to the port of Rotterdam**, as well as recent acquisitions and shifts in share ownership. Key developments include the changes around China Merchants, Navigator Investco, the announced (but postponed) sale of Singapore's stake in HPH and Evergreen becoming a shareholder in Hutchison Ports ECT Euromax.*
- *It also focuses on whether the **identity of these companies as mainland Chinese or Hong Kong** is geopolitically relevant to the positioning of Chinese companies and how that might play out. Like mainland-based companies, Hong Kong-based companies must take into account the interests of the Chinese state and the Chinese Communist Party (CCP) when pursuing commercial interests. At the same time, companies based in Hong Kong and mainland China can also potentially influence the Hong Kong and mainland Chinese governments. Further to that, listed companies have to take into account external shareholder interests.*
- *The Chinese government's attitude towards the EU is mostly positive. But when China feels that European governments or the European Commission are overstepping essential boundaries, the reaction is fierce. **The possibility that the Netherlands might be targeted by Chinese (informal) economic sanctions in the coming years cannot be ruled out.***
- *The Chinese central government could harm the port of Rotterdam and Dutch national interests in various ways, with varying degrees of likelihood of using **economic influence as a possible political tool for the Chinese government**. The section discusses possible government pressure on Chinese companies not to use the port of Rotterdam, or to shut down or sabotage terminal operations where there is operational influence, or the possibility of using Chinese technology or companies for espionage, data theft or influencing data flows.*

Chinese companies

Of the Chinese companies with activities related or relevant to the port of Rotterdam, the majority are state-owned enterprises directly under the central government of China.[3] These are shown in the text box below and in Annex 1. The main exception is CK Hutchison, a private listed company in Hong Kong of which about 30% of the shares are owned by billionaire and entrepreneur Li Ka-Shing and his family. Another exception is *National Public Information Platform for Transportation and Logistics (LOGINK)*, which is not a company but a data exchange platform under the Zhejiang provincial government. It currently has no relationship with the Port of Rotterdam, but it does probably have one with Chinese shipping companies such as COSCO and China Merchants. China Communications Construction Company (CCCC) and China National Nuclear Corporation (CNNC) have no relationship with the port themselves, but (through subsidiaries ZPMC and Nuctech) supply equipment to terminal companies (container cranes) and customs (container scanners), respectively. Silk Road Fund is an investment fund set up and funded by the Chinese central government to invest globally in projects that contribute to the Belt and Road Initiative.

3 Some of the listed subsidiaries are publicly traded and partly owned by external investors.

Major Chinese companies (directly or indirectly) relevant to the Port of Rotterdam (see Annex 1 for a visual of this overview):

China **COSCO** Shipping Corporation (parent company; head office Shanghai) • COSCO Shipping Holdings (holding company; head office Shanghai) o COSCO Shipping Lines (shipping company; head office Shanghai) o COSCO Shipping Ports (port/container operator; head office Hong Kong)
China Merchants Group (parent company; head office Hong Kong) • China Merchants Ports (port/container operator; head office Hong Kong) • Sinotrans (transport/logistics services; head office Beijing) o KLG Europe (transport/logistics services; head office Venlo)
China State Railway Group Co. (parent company; head office Beijing) • China Railway Chengdu Group Co. (rail transport; head office Beijing) o Chengdu International Railway Port Investment Development Co. (rail transport; head office Chengdu) – Chengdu International Railway Service Co. (rail transport; head office Chengdu)
CCCC – China Communications Construction Co. (construction; head office Beijing) • ZPMC – Shanghai Zhenhua Heavy Industries Co. (container cranes; head office Shanghai)
CNNC – China National Nuclear Corporation (nuclear technology; head office Beijing) • Tsinghua Tongfang (technology; head office Beijing) o Nuctech Co. (scanners; head office Beijing)
Silk Road Fund (investment fund; head office Beijing) • TRD Investco (investment vehicle; head office Hong Kong)
CK Hutchison Holdings (parent company, head office Hong Kong) • CK Infrastructure Holdings (infrastructure investments, head office Hong Kong) o AVR (waste processing; head office Botlek Rotterdam) • HPH – Hutchison Port Holdings (port/container operator; head office Hong Kong) o Europe Container Terminals (container operator; head office Rotterdam)
LOGINK (port data platform; head office Hangzhou)

Currently, the maximum capacity of the deepsea container terminals in the port of Rotterdam – based on information from the terminals themselves (websites) – is 17.8 million containers (TEU) (see Table 1).[4] Additionally, Rotterdam has shortsea terminal capacity, with an estimated capacity of 1.6 million TEU. Navigator Investco (COSCO and Silk Road Fund) and China Merchants are companies that have a clear relationship with the Chinese state. In total, these companies account for a container handling capacity of 1.45 million TEU: 8.2% of total throughput – a percentage lower than the average share (around 10%) held by Chinese government-controlled terminals in the EU as a

4 See: Port of Rotterdam, 'Terminals', consulted on 5 July 2023, for a map of the terminals.

whole.[5] Incidentally, this share is significantly lower than China's share of total deepsea container throughput at the port of Rotterdam, which was 55% in 2022. If Hutchison Port Holdings is also counted as a Chinese company, this represents a 73.3% share (13.05 TEU) of Rotterdam deepsea container terminal activity owned by Chinese parties. Only APM Terminal's Maasvlakte II (APMT MV2) is entirely in non-Chinese hands.

Table 1 Ownership ratios of Rotterdam deepsea terminals, July 2023.

Terminal	Maximum capacity (TEU)		Owner
	Total	Divided into ownership ratio	
Hutchison Ports ECT Delta	6.2 million		100% Hutchison Port Holdings
Hutchison Ports Delta II	3.3 million		100% Hutchison Port Holdings
Hutchison Ports ECT Euromax	3.2 million	2.1 million	65% Hutchison Port Holdings
		1.1 million	35% Navigator Investco
RWG	2.4 million	1.7 million	30% DP World, 20% HMM, 20% MOL
		0.7 million (0.35 million)	30% Terminal Link (14.7% CMP)
APMT MV2	2.7 million		100% A.P. Møller-Mærsk Group
Total	17.8 million		

Source: websites of terminals and terminal companies

Recent developments

In 2019, the relevance of China Merchants to the port increased with the acquisition (through Sinotrans) of KLG Europe and Terminal Link (49% owned by China Merchants) taking over CMA CGM's 30% stake in Rotterdam World Gateway (RWG).[6] Another shift in shareholding in one of the container terminals occurred in October 2021 when COSCO (through COSCO Shipping Ports) sold its 35% stake in the Hutchison Ports ECT Euromax terminal (the remaining

5 Jacob Mardell, 'COSCO takes stake in Hamburg port terminal', *MERICS*, 30 September 2021.

6 Rob Mackor, 'CMA CGM completes sale of RWG and seven more terminals', *Nieuwsblad Transport*, 27 March 2020.

65% is owned by CK Hutchison) to Navigator Investco, a joint venture between COSCO (51%) and Silk Road Fund (49%, through TRD Investco).[7] COSCO's motive for this move is not clear. COSCO's stake in the port of Rotterdam has thus diminished without changing the stake of the Chinese central government. On 31 August 2022, Hutchison Ports and Terminal Investment Limited Sàrl (TiL), the terminal investment company of Mediterranean Shipping Company SA (MSC), announced their intention to invest in the north side of the Hutchison Ports ECT Delta terminal and Hutchison Ports Delta II (the former APMT-R) to turn it into a highly productive and sustainable automated container terminal.[8] The exact capacity of this new terminal has not yet been revealed but this development will allow for further reductions in the share of Chinese government-controlled capacity at the port of Rotterdam. In late 2022, there were media reports that the Singapore state, which is a shareholder in HPH through investment fund Temasek Holdings and port and terminal company PSA International, plans to sell its 20% stake in HPH.[9] In mid-July this year, PSA temporarily postponed its intention to sell its stake in HPH because no suitable buyer was found who was willing to pay the 'premium' price for this type of investment. This is due to declining global economic growth and geopolitical tensions resulting in low container-volume growth, market analysts said.[10] Finally, Evergreen took a 20% share in the Hutchison Ports ECT Euromax terminal in August. Both COSCO (or Navigator Investco) and HPH have diluted their shares to allow Evergreen to participate. HPH remains the majority shareholder. The exact shareholding ratios have not yet been announced.[11]

7 COSCO Shipping Ports Limited, 'Press release', 20 October 2021.

8 'Hutchison Ports en Terminal Investment Limited Sàrl kondigen de intentie voor de gezamenlijke ontwikkeling van een containerterminal op Maasvlakte I aan', Hutchison Ports ECT Rotterdam, 31 August 2022.

9 Anshuman Daga, 'Exclusive: Temasek's PSA explores multi-billion dollar exit from Hutchison Ports sources', *Reuters*, 9 December 2022.

10 Cichen Shen, 'Recessionary sentiment drags on PSA's Hutchison Ports stake sale', *Lloyd's List*, 13 July 2023.

11 Rieneke Kok, 'Evergreen koopt belang van 20% in Euromax Terminal op Maasvlakte', *Nieuwsblad Transport*, 16 August 2023.

Distinguishing between mainland China and Hong Kong as investors in container terminals

COSCO Shipping Ports (CSP) is a listed Hong Kong company, in which COSCO Shipping Holdings holds a stake of over 58%.[12] COSCO Shipping Holdings itself is also a listed Hong Kong company. Parent company China COSCO Shipping Corporation has a minority stake in COSCO Shipping Holdings of almost 42%, is based in Shanghai and is owned by the central government of China. China Merchants Ports (CMP) and Sinotrans are subsidiaries of China Merchants Group (CMG), a Hong Kong-based company owned by the central government of China. CMG holds almost 69% of the shares of China Merchants Ports.[13] Hutchison Port Holdings is 80% owned by CK Hutchison, a Hong Kong-based company in which Li Ka-Shing and his family have a controlling stake.[14]

These Hong Kong-based companies pursue commercial interests, and in doing so they must take into account the interests of the Chinese state and the Chinese Communist Party (CCP). Chinese state-owned enterprises have to do that partly because their board chairmen are appointed directly by the CCP and they are supervised by the central government. Li Ka-Shing must also take into account the political interests of the Chinese government and the CCP because he depends on good relations with these actors to continue doing business successfully in Hong Kong and China. However, he and China's large state-owned enterprises are potentially in a position to influence the Hong Kong and mainland Chinese governments themselves. Moreover, for several subsidiaries (CSP, CSL, HPH), their management also has to consider external shareholder interests because they are listed on the stock exchange.

12 COSCO Shipping Ports Limited, 'Corporate Structure' in *Annual Report* (Hong Kong: COSCO Shipping Ports Limited, 2022), 24.

13 China Merchants Port Holdings Company Limited, *We connect the world: Annual Report*, (Hong Kong: China Merchants Port Holdings Company Limited, 2022), 65.

14 'About us: Group listed companies', CK Hutchison Holdings Limited, last revised in May 2023. Through subsidiary A.S. Watson Group, CK Hutchison also owns retail chains Kruidvat, Trekpleister and ICI Paris XL in the Netherlands.

Differences between HPH and Chinese state-owned enterprises as investors in (relation to) the port of Rotterdam:

- Chinese state-owned enterprises align more closely with China's government policy on foreign economic relations; the CCP ensures that company management is loyal to the Party and considers political interests in strategic decisions.
- Although Hong Kong is increasingly seen by European governments and politicians as part of the People's Republic of China and less and less as an autonomous entity, in the public (media) perception, the involvement of a Hong Kong private company seems, for the time being, to be perceived as less threatening and to attract less attention than if it were a Chinese state-owned enterprise. Despite Hutchison's major role in Rotterdam, Europe's largest port, in recent years, public attention for Chinese influence in the EU has focused much more heavily on COSCO's investments in Piraeus and Hamburg.[15]

Aspects where the distinction between mainland China and Hong Kong makes little difference:

- Commercial considerations are the guiding principle, but both Chinese state-owned enterprises and Hong Kong private companies are unlikely to exhibit behaviour that fundamentally deviates from China's national interests.
- Both HPH and Chinese state-owned enterprises are firmly integrated in an ecosystem that includes other (state-owned) Chinese companies.

Economic influence as a possible political tool for the Chinese government

The Chinese government remains committed to good relations with the EU and most EU member states, including the Netherlands. The main factor that has led to increased EU-China tensions in the past 18 months is related to the war in Ukraine. The EU objects to the close ties between China and Russia, and wants China to pressure Russia to end the war on terms set by Ukraine and the West. It is very unlikely that the Chinese government will meet this demand, as strategic

15 See, for example: Jacob Mardell, 'COSCO takes stake in Hamburg port terminal', *MERICS*, 30 September 2021, for a commonly used map on Chinese port influence in Europe (Figure 10 in this report), which illustrates only the interests of COSCO and China Merchants.

cooperation with Russia is seen by China as essential to avoid appearing as weak towards the US. At the same time, China's deteriorating relationship with the US increases its need for stable economic and diplomatic relations with Europe.

The Chinese government's attitude towards the EU is therefore predominantly positive. But when China feels that European governments or the European Commission are overstepping essential boundaries, the reaction is fierce. Such was the case when Lithuania allowed Taiwan to open a representative office in Vilnius under a name that differed from the usual name for such diplomatic facilities, and indicated greater acceptance of Taiwan as an independent entity. And the same applied to the sanctions imposed by the EU in March 2020 against Chinese officials for human rights violations against Uyghurs. In both cases, the Chinese government responded with measures: informal economic sanctions against Lithuania and formal sanctions against European officials, MEPs and organisations. Presumably in response to the decision of the Dutch Lower House to label China's policy towards Uyghurs as genocide, the Chinese government included sanctions against D66 MP Sjoerd Sjoerdsma, who initiated the motion that led to the genocide declaration by the Dutch parliament, in the aforementioned sanctions package against the EU.

The Dutch government's announcement to further restrict chip-machine exports to China from 1 September 2023 has been criticised by China but has not led – not yet at least – to countermeasures from China specifically and solely targeting the Netherlands. The Chinese government sees the Dutch export restriction as primarily the result of US pressure, and also seems to be deliberately choosing not to push the US and the Netherlands closer together. At the same time, China did issue warnings to the Netherlands that the restrictions could potentially damage the relationship between them.

The possibility that the Netherlands might be targeted by Chinese (informal) economic sanctions in the coming years cannot be ruled out. Some scenarios in this regard are described in Section 4. The main possible triggers are Dutch government measures related to Taiwan, technology transfer or human rights violations in China. The Dutch government is under pressure from parliament to tighten its human rights policy towards China, and from the US to give more support to Taiwan and export less advanced technology to China. It is also possible that the US will increasingly lean on the Netherlands and other NATO allies to be flexible in handling export licences for dual-use technology (with civilian but also military applications) destined for Taiwan.

Additionally, a sharp rise in tensions around Taiwan should be taken into account. Should that happen, it is likely that economic sanctions will be imposed reciprocally between the EU and China, and Chinese commercial relations will be considered by both sides primarily from a security and political perspective. A similar situation could arise if China were to supply (heavy) weapons to Russia that the Russian military could deploy in Ukraine. The likelihood of an extreme China-Taiwan crisis or a China-Ukraine crisis seems limited for now. However, as described above, the likelihood of Dutch measures in a non-crisis situation leading to Chinese countermeasures is relatively high.

Activities by the Chinese central government regarding the port of Rotterdam could harm *Dutch national interests* in the following ways (i.e. interests broader than just those of the port of Rotterdam):

- By putting pressure on Chinese (mainland and Hong Kong) companies so that they no longer use the port of Rotterdam. This could result in the temporary or permanent loss of port visits/freight flows, and/or divestment. The likelihood that the Chinese government would take such a measure exists, but is limited by China's own strategic interest in continuing to exploit access to the EU market via Rotterdam.
- By putting pressure on Chinese (mainland and Hong Kong) companies for them to shut down their operations as terminal operators, or undertake activities to sabotage container terminals in which they have operational influence (as operators or technology suppliers). The likelihood that the Chinese government would take this step and thus be able to actually commit sabotage seems very small. On the one hand, this would only make sense for China if there were serious conflicts in its relations with the EU. On the other hand, it seems likely that in the event of such an escalation, the Dutch state would take timely measures to prevent affected container terminals from being put out of operation due to sabotage.
- Using the presence of Chinese technology and/or the involvement of Chinese (mainland and Hong Kong) companies for espionage, data theft or influencing data flows in ways detrimental to national security or the economic competitiveness of the port or the Dutch economy. The Chinese state is responsible for a large number of international cyberattacks aimed at data theft, and it is likely that the various parts of the port of Rotterdam are also targeted. However, it seems likely that these attacks are mainly carried out via the internet. Nuctech's scanners in the Netherlands are not connected to the internet and cannot transmit data to Chinese actors, according to Dutch Customs. Whether the same applies to ZPMC's container cranes is currently

being investigated by the Dutch government.[16] Vulnerabilities arising from the use of Chinese technology, and the possibility of mitigating them through technical solutions, vary from case to case, but cannot be completely ruled out. Whether such vulnerabilities are actually significant for national security, and how that significance should be weighed against the benefits of using Chinese technology, is not clear in most cases and requires further research. The extent to which the Chinese government can use Chinese influence in container terminals to monitor military activities in the port, whether this is significant for the security interests of the Netherlands and its allies, and to what extent the government can take measures to mitigate this risk under existing conditions is unclear and depends partly on local circumstances (such as the positioning of military disembarkation and embarkation vis-à-vis those terminals in which Chinese actors have significant influence).[17]

16 'Resolution accompanying Answers to Parliamentary Questions on suspect Chinese cranes in Dutch port', Ministry of Infrastructure and Water Management, 21 April 2023.

17 A (current) concern on the NATO side is possibly that such information would get to the Russian government via Chinese companies and China. With continuing geopolitical tensions between China and the West encouraging closer cooperation between China and Russia, this possibility should indeed be taken into account.

2 Response of the EU and the Netherlands to Chinese influence in the port sector

Summary

- *This section discusses the **changing attitudes of European governments** towards Chinese influence in European seaports due to geopolitical factors, especially in the Rotterdam port area. It describes developments since 2019, the publication date of the report 'European Seaports and Chinese Strategic Influence' on which this study builds.*[18]
- *First, it lists the **geopolitical factors** driving this change: the US-China relationship, the EU-China relationship, the war in Ukraine, tensions between China and Taiwan, and the COVID pandemic.*
- *It then analyses at the European and Dutch level how the perception of Chinese influence in European seaports has become **more negative**. **Awareness of the potential risks** has grown, with economic security and 'de-risking' being increasingly emphasised.*
- *Finally, it discusses relevant national and European **regulations** that follow from the changing attitudes. These focus mainly on curbing future influence, although it is possible that upcoming measures will also target current Chinese influence in European seaports.*

18 Frans-Paul van der Putten, *European Seaports and Chinese Strategic Influence: The relevance of the Maritime Silk Road for the Netherlands*, (The Hague: Clingendael Institute, 18 December 2019).

Geopolitical factors

There are five key geopolitical factors driving the changing European and Dutch attitudes towards Chinese influence in European seaports since 2019:

1. The US-China relationship
2. The EU-China relationship
3. The war in Ukraine
4. Tensions between China and Taiwan
5. The COVID pandemic

These factors have made the overall perception of China more negative in the EU and the Netherlands, and led to a more critical look at Chinese influence in European seaports.

1. The US-China relationship

The US-China relationship has deteriorated sharply in recent years due to the growing rivalry between the superpowers. The scope for cooperation has diminished, even on issues like climate change, where there are clear shared interests. Instead, the competition element has gained the upper hand, in terms of trade and in relation to technology, defence, etc. Policy-level steps are being taken on both sides to curb ties in these areas. This also applies to the maritime sector: many people in the US see the *Belt and Road Initiative* and related Chinese investment in ports as China's attempt to gain more influence in the world at the expense of the US. As a result, US politicians and policymakers are paying more attention to the potential risks, as was the case for Chinese container cranes from ZPMC and LOGINK (see text box).[19] These US concerns also influence the public debate and policymakers in Europe, and lead to the question of whether or not to pursue the same course of action here. Additionally, the US is also putting pressure on its partners to follow US foreign policy. This trend will continue: attempts at rapprochement between the US and China have not been very successful so far, and there is little political appetite in either country to move in a different direction.

19 USCC Staff, *LOGINK: Risks from China's Promotion of a Global Logistics Management Platform*, (Washington: U.S.-China Economic and Security Review Commission, 20 September 2022); U.S. Congress, House, *Securing Maritime Data from Communist China Act of 2023*. S.939. 118th Cong, 1st session, *Congressional Record*, (22 March 2023).

China's National Public Information Platform for Transportation and Logistics (LOGINK):

- December 2021: the *U.S.-China Economic and Security Review Commission* publishes a request for proposals for a report on logistics data platform LOGINK.
- September 2022: The report subsequently published warns of the risks of using LOGINK.
- March 2023: Senator Tom Cotton introduces a bill to ban the use of LOGINK by US military or commercial interests, and to stop its use in international agreements.

2. The EU-China relationship

The relationship between the EU and China is also changing. The EU is currently reviewing China policy, after Commission President Ursula Von der Leyen already called for 'de-risking' – not decoupling – from China. There is no EU consensus yet on how it should position itself. China is capitalising on this with a diplomatic charm offensive towards the EU and its member states in the hope of improving the relationship, after China's COVID policy did not allow diplomatic visits for a long period of time. This strategy focuses in particular on bilateral diplomacy and capitalising on national interests of EU member states. However, there are some fundamental causes of the friction in the EU-China relationship. For instance, European sanctions due to Chinese human rights violations and Chinese countersanctions have not yet been lifted, a trade dispute between the EU and China at the World Trade Organization is still ongoing, and the cyber threat from China persists. In addition, China's warm relationship with Russia is causing discomfort in the EU, which has turned public sentiment towards China more negative. Because of this continuing friction, the review of the relationship with China, with its emphasis on de-risking, is also taking a closer look at Chinese influence on European seaports.

3. The war in Ukraine

Russia's invasion of Ukraine on 24 February 2022, and the war that followed, had major implications for European world views and policies. This also affects European attitudes towards China, because of China's friendly relationship with Russia and its reluctance to condemn the war. China's political and diplomatic support for Russia is a thorn in Europe's side. For European policymakers, the war has highlighted the need to become less dependent on countries like Russia and China, and limit their influence in vital sectors.

4. Tensions between China and Taiwan
Growing tensions between China and Taiwan, and the threat of escalation, are also fuelling concerns regarding European dependence on China. The EU and its member states do not currently agree on how to deal with these tensions.[20] However, it is clear that the various escalation scenarios, from an economic blockade to a military invasion, would have negative consequences for the global economy and the EU-China relationship. This also leads to a more critical look at dependencies on China in European seaports, which could limit European policy in case of escalation.

5. The COVID pandemic
A final geopolitical factor is the COVID pandemic, which caused major disruption to supply chains. In part due to China's zero-COVID policy and lockdowns at Chinese ports, this also caused logistical problems in European seaports. For example, the COVID pandemic, like the war in Ukraine and the tensions between China and Taiwan, drew attention to Europe's interconnectedness with the Chinese economy, and Chinese influence in seaports.

Changing European Union attitudes

Due to the five geopolitical factors described, the European Union's attitude towards Chinese influence in European seaports has changed. Overall, it has become more negative, although there are important differences between the attitudes of the European Parliament and the European Commission.

European Commission
In March 2019, the European Commission made its view of China clear with the EU-China Strategic Outlook, indicating its view of China as a competitor, partner, and systemic rival. Since then, the friction in the relationship with China has only increased, and the Commission, in consultation with member states, is now working on a reassessment of China policy. European Commission Vice-President Josep Borrell gave three reasons for the reassessment: changes

20 Xiaoxue Martin, 'Why the European inconsistency on Taiwan is a concern', *Clingendael Spectator*, 23 May 2023.

within China, hardening strategic competition between the US and China, and China's growing role in regional and global issues.[21]

The Commission highlights economic security as a key issue in the reassessment. This theme is also central to the 'de-risking' of the EU-China relationship, pushed by Commission President Von der Leyen. Additionally, the Commission published a proposal for an overall 'European Economic Security Strategy' in June 2023, which EU leaders will discuss in the coming months.[22] Von der Leyen stressed the country-neutrality ('country agnostic') of this strategy, although China is a big factor in the plans. This also applies generally to the steps taken by the European Commission to enhance and de-risk the EU's strategic autonomy. Vice-President Borrell stressed in April that these measures are not specifically targeted against any country, and follow World Trade Organization rules.[23] However, it is clear that the measures are being taken largely because of China.

Chinese influence in European seaports is among the concerns the European Commission wants to address with its new direction. In spring 2022, for instance, the European Commission warned the German government not to approve COSCO's investment in a Hamburg port terminal.[24] The reasons for this assessment were the potential that sensitive information about the port could be leaked to China, and that the port of Hamburg is of both civilian and military importance.

European Parliament

Whereas the European Commission generally emphasises country neutrality in its rhetoric and measures, the European Parliament is more explicit on its 'China-centric' direction. Additionally, the European Parliament is putting pressure on the Commission to continue limiting Chinese influence. It also adopted a resolution for a new EU-China strategy in September 2021, partly

21 Josep Borrell, 'How to deal with China', *European Union External Action Service*, 17 May 2023.

22 European Commission, 'An EU approach to enhance economic security', 20 June 2023.

23 Josep Borrell, 'My view on China and EU-China relations', *European Union External Action Service*, 13 April 2023.

24 'EU warned Germany against approving Chinese investment in port-Handelsblatt', *Reuters*, 21 October 2022; Moritz Koch and Julian Olk, 'EU warnte schon im Frühjahr vor Einstieg der Chinesen in den Hamburger Hafen', *Handelsblatt*, 21 October 2022.

because of China's strong economic growth and assertive foreign policy, including the Belt and Road Initiative.[25]

Regarding European seaports, the European Parliament demonstrated its direction with regard to China most clearly with the appointment of MEP Tom Berendsen as Rapporteur European Ports Strategy on 10 May 2023.[26] It is an 'INI – Own-initiative procedure', or a procedure at the Parliament's 'own initiative'. Berendsen will engage with stakeholders in Europe and write an own-initiative report for the European Parliament, which will be used to spur the European Commission into action. Berendsen has already stated that he believes that: 'Ports are the gateway to Europe and we are handing over the keys to Chinese parties'.[27] The strategy's proposal is to limit foreign interests in European port companies. Berendsen said this would mean that no new Chinese investments from Chinese parties should be allowed, and the already existing influence should be reduced.

Additionally, the changing attitude of the European Parliament since 2019 can be seen in the Parliamentary questions asked. These include questions by Tom Berendsen on 16 March 2023 regarding the possible dangers of using Chinese cranes in ports, or on 17 November 2022 concerning the use of the Chinese data platform LOGINK, or by Joachim Stanisław Brudziński on a possible Chinese stake in a Polish port's container terminal.[28] In December 2022, the European Parliament entered into a discussion with the Commission during 'Question Time' about protecting EU strategic infrastructure from Chinese influence.[29] We can expect the Parliament to continue pressing the Commission to tighten legislation (see Annex 2).

25 European Parliament, 'A new EU strategy on China' (2021/2037 (INI)), 16 September 2021.

26 European Parliament, 'Building a comprehensive European port strategy', (2023/2059 (INI)), consulted on 5 July 2023.

27 'CDA MEP Tom Berendsen: 'We want the keys to the gates of Europe back', *Sven op 1*, 12 May 2023.

28 European Parliament, 'Potential plans for German companies with Chinese participation to acquire stakes in container terminals in Polish ports', Parliamentary question (E-000904/2023), 17 March 2023.

29 European Parliament, 'Protecting EU strategic infrastructure from China's influence', 8 December 2022.

Changing Dutch attitudes

In the Netherlands, too, the attitude of the Lower House and the Dutch government towards Chinese influence in European seaports has also changed. As in the EU institutions, awareness of potential threats and strategic dependencies has grown, with economic security becoming an increasing focus. As a result, there is now closer attention than before on the downside of cooperation with and investment from China.

Since the China Memorandum of May 2019, the Cabinet has been focusing on integrated EU actions towards China, including when it comes to Chinese investments, focusing on assertiveness and reciprocity.[30] This was confirmed in the Port Memorandum 2020-2030, which the Ministry of Infrastructure and Water Management sent to the Lower House in November 2020. Similar to the European Parliament's position in the EU, the Lower House is fiercer on China than the Cabinet. It urges policymakers, for example during committee debates[31] or through motions, to act to curb possible dangers of Chinese influence in European seaports. This is often in response to media coverage of these issues, such as about Chinese cranes at Dutch ports[32] and cybersecurity vulnerabilities of Nuctech scanners at the port of Rotterdam.[33]

In December 2022, MPs Van der Molen and Koerhuis also submitted a motion on creating a European port strategy with agreements on participation and investment by foreign companies.[34] It calls on the government 'to make efforts at the EU level to create a European port strategy to protect ourselves from unwanted foreign influences on the one hand and keep our ports competitive on the other', requiring agreements on foreign investment to be made.

30 Ministry of Foreign Affairs, 'Netherlands-China: a new balance', 2019.

31 Lower House, 'Committee debate on maritime affairs', 30 May 2023.

32 Ministry of Infrastructure and Water Management, 'Answering parliamentary questions – Suspect Chinese cranes are also in Dutch ports: concerns about espionage', 8 May 2023.

33 Lower House, 'Written questions on cybersecurity vulnerabilities of scanners at the port of Rotterdam', 15 February 2021.

34 Lower House, 'Motion by members Van der Molen and Koerhuis on creating a European port strategy with agreements on participation and investment by foreign companies', 1 December 2022.

Following this, the Ministry of Infrastructure and Water Management drew attention to joint action in Brussels, after which it was agreed that 'at the initiative of the Netherlands, an exploratory memorandum will be drawn up that will address the European frameworks needed for decision-making around foreign investment in European ports'.[35] Additionally, it was suggested that relevant member states discuss follow-up steps at the official level. This would enable deliberations on whether a separate port strategy should be developed, or whether the topic could be included in the update of the 2014 EU Maritime Security Strategy (EUMSS), which the EU is currently discussing (see Annex 2).[36]

So Dutch awareness and concerns about Chinese influence in European seaports have grown. This could also have a downside, warns recent research commissioned by the National Coordinator for Counterterrorism and Security. According to this study, there is also a growing critical awareness in the port sector that concerns about state-based threats can overstate the risk, thus harming the interests of the sector. Enhanced resilience to state-based threats may actually interfere with the logistics process at ports by, for example, impeding the freedom of movement of transport and trade, and thus itself pose a risk to the port sector.[37]

Relevant regulations

In response to the changing attitudes towards Chinese influence in European seaports, various laws and regulations have been adopted at both the European and Dutch level (see Annex 2 for an overview). These instruments focus in particular on curbing future influence, with the Dutch Security Screening of Investments, Mergers and Acquisitions Act (Vifo Act) being in effect retroactively to 9 September 2020. There are no forthcoming regulations on reducing older Chinese investments yet, although Tom Berendsen, as port rapporteur for the European Parliament, seems to be pushing for this. Berendsen mentions as an option for a European port strategy that member states could agree on a

35 Lower House, 'Status of outstanding motions and commitments and some relevant files related to maritime affairs', 23 May 2023.

36 European Commission, 'Maritime Security: EU updates Strategy to safeguard maritime domain against new threats', 10 March 2023.

37 Scientific Research and Documentation Centre, 'Become more aware of state-based threat, but be alert to overstated concerns', 2 June 2023.

maximum percentage for the port's shares with non-European ownership.[38] As far as the port sector is concerned, the Vifo Act relates to investments in the Port of Rotterdam Authority, as the National Coordinator for Counterterrorism and Security identifies the Harbour Master's Division of the Port of Rotterdam Authority (and thus the Port Authority as a whole) as a vital provider of shipping traffic handling services.[39] Companies located in the port of Rotterdam, such as container terminals, are not considered vital infrastructure under the Vifo Act. The EU direct investment alignment framework has a broad coverage that is likely to include investments in container terminals, but does not affect the competence of the Netherlands as an EU member state to decide independently on reviewing or blocking incoming direct investment.[40] The Chinese government is closely monitoring these developments: as Chinese EU ambassador Fu Cong pointed out in an interview in December 2022, the European measures are a worrying point of friction in the EU-China relationship.[41]

38 Het Financieele Dagblad, 'Power-hungry China is already embedded deep in the capillaries of European industry', 3 May 2023.

39 Lower House, 'Rules introducing screening of acquisition activities that may pose a risk to national security given their impact on vital providers or companies operating in the field of sensitive technology (Security Screening of Investments, Mergers and Acquisitions Act)', 1 July 2021; Upper House, 'Security Screening of Investment, Mergers and Acquisitions Act', 30 June 2021.

40 European Commission, 'EU foreign investment screening mechanism becomes fully operational', 9 October 2020.

41 Mission of the People's Republic of China to the European Union, 'Transcript of Ambassador Fu Cong's Interview with the South China Morning Post', 23 December 2022.

3 Chinese interests in the port of Rotterdam and prospects

Summary

- *This section discusses **Chinese interests** in the port of Rotterdam, and prospects of this for the future.*
- *It first considers the **declining volume of direct investment** from China in general.*
- *It then discusses developments in freight flows related to China via the port of Rotterdam. This shows a **sharp increase in the importance of Chinese cargo** for the port of Rotterdam and the Dutch economy: import, export, transhipment and re-export flows. This increase is not reflected in a similar increase in the impact of Chinese activity in logistics in the Netherlands.*
- *The increased importance of Chinese parties is particularly visible in container transhipment.*
- *There is a big difference between the volume of **China-related deepsea container flows** handled at the port of Rotterdam (55% share) and the degree of **China-related ownership** in the Rotterdam container terminal infrastructure (8.2% share). If Hutchison Port Holdings is also counted as a Chinese company, this represents a 73.3% share (13.05 TEU) of Rotterdam deepsea container terminal activity owned by Chinese parties. Most container terminals are multi-user terminals.*
- *Besides terminal expansion plans, of particular relevance to Chinese influence are **changes in ownership structures that expand Chinese interests**. So it is less about the arrival of new investors from China.*
- *Finally, it reports on **investments in chemicals and waste processing** in the port of Rotterdam. For the chemical industry, the way China exports is a particular threat to the Rotterdam cluster, due to dumping and the lack of a level playing field. Extensive investment by Chinese companies in the Rotterdam port and industrial area is not expected. The role of AVR – part of CK Hutchison – is highly relevant because of its important role in specialised waste processing and because of its role in the energy transition.*

Development of Chinese foreign direct investment (FDI)

In 2022, Chinese FDI to Europe – the EU-27 and the UK – fell to 7.9 billion euros, the lowest amount since 2013.[42] This is down 22% from 2021, and was mainly due to a lack of Chinese M&A activity. In 2022, most Chinese FDI went to the UK, France and Germany. As recently as 2021, the Netherlands received the most Chinese investment through Hillhouse Capital's acquisition of Philips' home-appliances division. From 2000 to 2022, a total of 13.7 billion euros of Chinese FDI went to the Netherlands. China's total FDI has fallen sharply: from 16% of global FDI in 2004 to over 3% in 2021.[43] In 2021, 66% of this amount went to M&A and 34% to greenfield investment. These greenfield investments have changed significantly in nature, from investments in infrastructure, real estate and energy to the production of (electric) cars, batteries, consumer goods and entertainment.[44] Sectors usually associated with the Belt and Road Initiative – such as investment in seaports – have thus clearly declined in importance. Incidentally, 2022 did see a rebound in BRI investments, with Europe and especially Poland rising again as a destination for BRI investments.[45] This was clearly at the expense of BRI investments in Africa and West Asia. Investment in battery production (technology sector) was largely responsible for this growth. In general, there are concerns around BRI because of the need for financial bailouts in several countries, write-offs, corruption, poor quality of construction and 'ghost investments', as well as infrastructure investments going from nowhere to nowhere, such as a one-billion-dollar road project in Montenegro.[46]

Development in freight flows related to China

Imports of goods from China into the port of Rotterdam have increased sharply in recent decades. This mainly involved containerised flows (a detailed overview of the development of these flows is given in Annex 3). Based on figures from

42 Agatha Kratz et al., *Chinese FDI in Europe: 2022 Update*, (MERICS and Rhodium Group, 2023).

43 Seth O'Farrell, 'Less is more? China's new FDI math', *fDi Intelligence*, 18 February 2022.

44 Alan Beattie, 'Europe gets Chinese car factories rather than roads and railways', *Financial Times*, 15 May 2023.

45 Cristoph Nedopil, *China Belt and Road Initiative (BRI) Investment Report 2022*, (Shanghai: Green Finance & Development Center of the FISF Fudan University, 2023).

46 James Kynge, 'China grants billions in bailouts as Belt and Road Initiative falters', *Financial Times*, 28 March 2023.

the Port of Rotterdam Authority, imports of full containers from China handled in the port of Rotterdam increased by an average of 3.6% per year to 7.7 million TEU in the period 2007-2022.[47] This growth rate is well above the overall growth rate of container throughput in the port during this period, which showed an average annual growth rate of 2.0% (from 10.8 to 14.5 million TEU). The rate is also significantly above the growth of the throughput of full containers (TEU) from China to Western Europe as a whole, which grew at an average annual rate of 1.6% (from 6.3 to 8.1 million TEU). In the process, the value of the contents of these containers grew faster: by 6.9% on average per year (from 32.4 to 87.6 billion US dollars). Container growth increased sharply in 2021 due to the spending surge related to COVID-19, only to show a decline again in 2022.

Some important background to this much faster growth of Rotterdam compared to the ports of Western Europe as a whole lies in the role of re-exports: the extensive complex of distribution centres aimed at importing Chinese products and then exporting them after adding logistics-related value-added activities (value-added logistics). Increasing orders via the internet are also an important factor in this growth.

Chinese container imports are dominated by consumer products. Looking at the value of container imports, the 'computers and related products' category is the most important – a category that incidentally showed a dramatic decline in 2022. Following in a distant second place behind these consumer goods is imports of industrial products. The key growth driver there is the freight group 'semiconductors', which mainly involves equipment and machinery related to the production of semiconductors, rather than these products themselves, which are usually transported by air.

The value of Dutch exports to China consists largely of foodstuffs, frozen foods and a large number of industrial goods such as chemicals and 'basic industrial raw materials' (see Annex 3). Major high-tech exports to China are transported by air.

47 In Annex 3, this report also shows Statistics Netherlands (CBS) figures that are generally above those of the Port Authority.

Exploration of investment in the container segment at the port of Rotterdam

There are four developments that affect the extent of ownership by Chinese state-related parties in Rotterdam's container transhipment companies, currently 8.2%:

1. Sale of Singapore's stake in Hutchison Ports Holdings (postponed for now)
2. Investment plans of Hutchison Port Holdings and Terminal Investment Limited Sàrl
3. Expansion plans of APMT MV2, RWG and Hutchison Ports ECT Euromax
4. Share of Evergreen in Hutchison Ports ECT Euromax terminal.

As has already been stated in Section 1, the Singapore state plans to sell its 20% stake in Hutchison Ports Holdings, with COSCO Shipping Ports and China Merchants Ports mentioned as possible buyers. Meanwhile, this intention has been postponed. If this stake in Hutchison is actually sold to both Chinese container terminal operators at a later date, the share of container transhipment in Rotterdam directly controlled by the Chinese government increases from the current 8.2% (1.45 million TEU: 35% in Euromax and 14.7% in RWG – see Table 1) to 21.2% (3.77 million TEU). This puts Rotterdam significantly above the European average of around 10%.

In contrast, recent investment plans are reducing the share of Chinese state-related parties again. Hutchison Port Holdings, together with TiL – Terminal Investment Limited Sàrl, MSC's terminal organisation – is planning a comprehensive refurbishment of the former APMT-R terminal (now: Hutchison Ports Delta II) and the part of the Delta terminal (DDN) used by MSC.[48] This will reduce Hutchison's share and bring TiL into the port of Rotterdam as a new terminal operator. The exact size of the new capacity is not yet known.

China's share is also decreasing due to APMT MV2's planned 2 million TEU expansion. Furthermore, on 28 June 2023, RWG announced an expansion of its capacity by 1.8 million TEU.[49] As CMP only has a 14.7% stake in RWG (Table 1), this also reduces China's share. With APMT and RWG's plans, China's share drops to 7.9% of the planned new capacity of 21.6 million TEU. In addition, Evergreen (Taiwan) is acquiring a stake in the Hutchison Ports ECT Euromax terminal,

48 Port of Rotterdam, 'Hutchison Ports and Terminal Investment Limited Sàrl jointly announce intention for development new container terminal Maasvlakte I', 31 August 2022.

49 Rotterdam World Gateway, 'RWG Expansion', 28 June 2022.

diluting the interest of existing shareholders, including COSCO (or Navigator Investco). This means a further decrease in the share of parties affiliated to the Chinese state with direct shares in the port of Rotterdam.

What is clear from recent developments is that apart from expansion plans, it is mainly changes in ownership structures that are increasing Chinese influence, such as the sale of Hutchison shares to COSCO/China Merchants, and it is less about the arrival of new Chinese state-related investors from China. The sale of COSCO Shipping Ports' stake to Navigator Investco in 2021 has remained under the radar for now. This makes the Euromax Terminal, and thus a part of the port of Rotterdam, more explicitly related to the Belt and Road Initiative (through its link to the Silk Road Fund) than before, without any publicity.[50]

It is very possible that changes in ownership structures will continue and other parts of RWG or Hutchison Ports will be sold to Chinese parties. But non-Chinese state-related parties could also acquire shares in these terminals, such as MSC. It is also possible that the influence of the Chinese state in the Hutchison Group is growing, as already suggested elsewhere.[51] Illustrative of this is the relatively unnoticed possible increase in the share from 8.2% to over 20% ownership of Chinese government-controlled companies in the Rotterdam container infrastructure, should PSA International sell its stake in HPH to COSCO/China Merchants at a later date.

Finally, Rotterdam has a strong position on the Asia-Europe trades due to its ability to handle very large ships (24,000+ TEU). Rotterdam's advantage means that prospects for the continuance of the rapid growth of Chinese cargo as signalled above relative to Western European ports as a whole could potentially persist. In 2022, about half of Rotterdam's container throughput was related to China. This share gives greater perspective on a possible 20% market share of Chinese state-related parties in the port of Rotterdam.

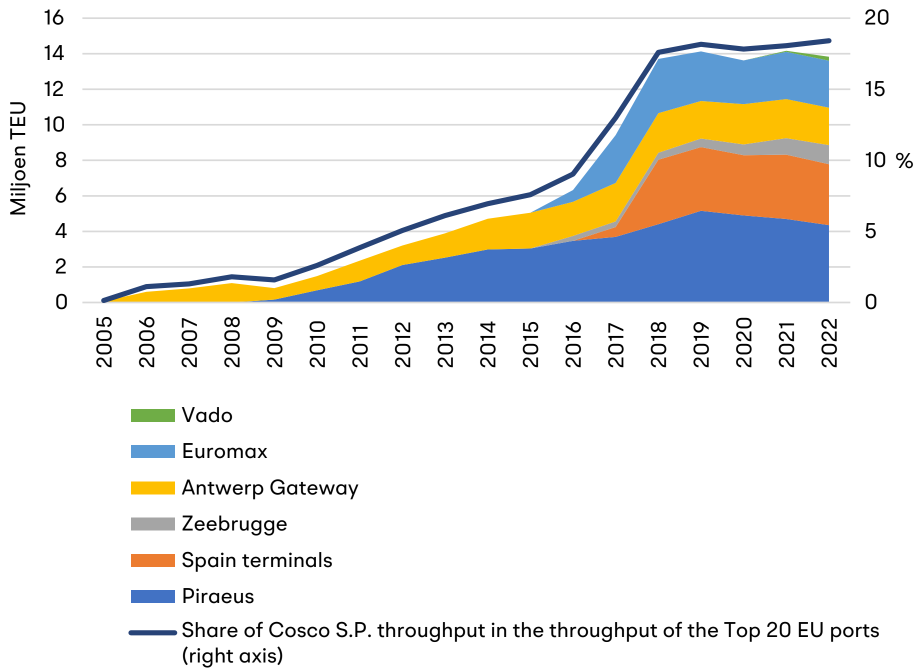
50 'Silk Road Fund Acquires Minority Stakes in Euromax Terminal (Netherlands)', *Silk Road Fund*, 26 October 2021.

51 Siem Eikelenboom and Casper Rouffaer, 'China is already embedded in the capillaries of logistics Netherlands', *Follow The Money*, 13 December 2022; Laurens Groeneveld and Maria Pankowska, 'NATO in deep water because of Chinese port investments', *VSquare*, 18 October 2022.

Role of COSCO Shipping Ports highlighted

COSCO Shipping Ports is the only major terminal operator to report the performance of its terminals worldwide. This overview (Figure 1) shows the rapid build-up of COSCO around 2016-2017 and its stagnation in the last five years. The shares in Antwerp Gateway and Piraeus – a sizeable share of the total – were already created before 2010. The rapid build-up is explained by acquisitions in both Euromax, Zeebrugge and Spanish terminals. Incidentally, the picture shows an overestimate because it refers to the total volumes of terminals, including terminals where COSCO holds only part of the shareholder value, such as Euromax. In 2021, the share of terminals controlled to a greater or lesser extent by COSCO stood at 18.4% of the twenty largest terminals in Europe – a share that will increase further due to the investment in the Tollerort terminal in Hamburg. Worthy of note is the stagnation of Piraeus' share.

Figure 1 Container throughput COSCO Shipping terminals in Europe, * 1,000 TEU, 2005-2022 and market share of COSCO Shipping in the top 20 European container ports

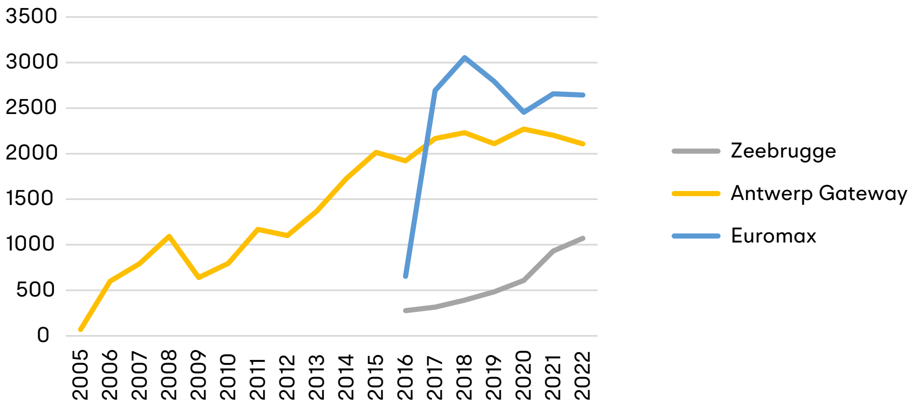


Source: COSCO Shipping and Eurostat[52]

52 COSCO Shipping Ports Limited, 'Businesses: Monthly throughput', consulted on 5 July 2023.

The directive nature of COSCO Shipping Ports is evidenced by container throughput at terminals in Antwerp, Zeebrugge and Rotterdam. Soon after the acquisition of the share in the Euromax Terminal, volumes declined sharply in Rotterdam, only to increase in Zeebrugge (Figure 2). The market gives various reasons for this, such as labour shortages at ECT or the need to develop a minimum efficiency of scale for the COSCO terminal in Zeebrugge. Influence in three terminals located very close to each other, allows optimisation of these volumes. Incidentally, this is also done by other organisations with interests in different ports, such as MSC.

Figure 2 Container throughput COSCO Shipping terminals in Antwerpen-Bruges and Rotterdam, * 1,000 TEU, 2005-2022



Source: COSCO Shipping[53]

Role of other actors in container chain

In exploring the possibility of Chinese actors playing a greater role in supply chains of interest to the port, and the implications of this, the role of freight forwarders and supply chain management and logistics 'support operations', such as financing, insurers, information technology, etc., should also be considered.

In some of the conversations we had with representatives of large forwarders, they stated to be aware of instances where Dutch shippers experienced pressure from the Chinese government to use COSCO for the transport of container cargo destined for China. In their view, not doing so would expose them to an increased

53 COSCO Shipping Ports Limited, 'Businesses: Monthly throughput', consulted on 5 July 2023.

risk of not obtaining necessary import permits, or of their cargo being stopped from entering China due to (non-existent or exaggerated) defects to their goods. Incidentally, this is in line with the practice of Japanese parties several decades ago.

Previous research on China's relationship with Dutch logistics has concluded that China has a weak position when it comes to dominant freight forwarders.[54] Only Sinotrans – a company closely linked to the Chinese state as part of China Merchants – is among the global top 50 freight forwarders operating globally. However, Sinotrans is not part of the top 100 logistics companies in the Netherlands. Nor does China have any business operations among the major warehouse and logistics enterprises in the Netherlands – with the exception of KLG Europe, acquired by Sinotrans. There is also a role for banks, insurers and other Chinese service providers based in prominent locations in Rotterdam (Figure 3). The role of these institutions is as yet unclear – to what extent they pose a threat to the facilitation of trade flows is potentially relevant to any further in-depth research.

Figure 3 Bank of China branch on Coolsingel

Besides the role of Chinese parties in deepsea terminals, inland terminals are also involved. Hutchison Port Holdings has an inland terminal network with terminals in Venlo, Amsterdam, Moerdijk, Willebroek and Duisburg. Furthermore, railway company China Railway Container Transport Corp., Ltd (CRCT) established its European headquarters in Duisburg and selected Duisburg as its central rail hub in Europe.

54 Larissa van der Lugt et al., *China's relationship with NL logistics: Research on China's relationship with logistics activities related to freight flows of interest to NL*, (Rotterdam: Erasmus UPT, 2021).

China's role in other sectors at the port of Rotterdam: chemicals and waste processing

The possibility of a larger share of Europe's chemical sector falling into Chinese hands is limited, both commercially and geopolitically. Additionally, the level of FDI from China has fallen sharply. The relevance of China for chemical activities at the port of Rotterdam is mainly related to the difference in level playing field between producing in China and the Netherlands and the fact that China is currently dumping chemical products on the world market due to lower demand at home. The ownership of AVR by CK Hutchison should obviously be mentioned, but it is also shown below that AVR represents a key component of the various pillars aimed at the Port of Rotterdam Authority's energy transition.

The chemical sector

The chemical sector is not a major sector in Chinese foreign direct investment, and certainly not as part of BRI-linked investment: in 2022, specific Chinese investment in chemical projects was close to zero.[55] Although ChemChina acquired Swiss company Syngenta (agricultural technology/crop control) – also important for the Netherlands – in 2015 and merged it with Sinochem under the Syngenta Group label, there have been no major acquisitions in the port of Rotterdam and there is currently no major dominance of Chinese parties in the chemical sector from a global perspective.[56] The biggest players in the chemical industry are in Europe and the US. For these companies, China is an important destination for FDI – with BASF's 10-billion-dollar investment in China a key illustration of this.[57]

It is the previous and ongoing build-up of petrochemical capacity in China that poses a threat to the port of Rotterdam, owing to:

- The much lower cost of raw materials and energy in China (as well as in the US and the Middle East).
- The much lower production costs due to modern, more large-scale and therefore more efficient plants in China compared to Europe.
- The lower impact of sustainability costs in China versus Europe (EU ETS).

55 Cristoph Nedopil, 2022.

56 Larissa van der Lugt et al., 2021, 26.

57 Tom Hancock, 'BASF breaks ground on $10bn China chemical complex', *Financial Times*, 24 November 2019.

- The fewer disadvantages of costs related to regulation in China compared to the EU.
- The lack of a level playing field due to state aid and a lack of transparency in Chinese production processes.
- Products that can be transported at a low cost, especially now that container rates are back to pre-COVID levels.
- Limited market demand due to stagnant market development in Europe. China's market share of global chemical sales increased from 28% to 43% over the period 2011-2021, while Europe's share fell from 19% to 15% over this period.[58]

BASF is investing heavily in China, and will instead have to 'permanently' downsize in Europe because of the drawbacks mentioned above: high costs for energy and raw materials, expensive and complex regulations (REACH) and market demand in China.[59]

The Royal Association of the Dutch Chemical Industry (VNCI) does not expect large-scale investment from Chinese companies in the port of Rotterdam – especially not at the moment given the current sentiment in the Netherlands towards China's role in the port of Rotterdam. There is also the uncertainty of the impact of carbon taxes and emissions trading. However, chemical products from China are currently being dumped on the European market, which is affecting activity at the port of Rotterdam and has led to the shut-down of parts of production at at least two companies. With growth in China currently at a low level, China's existing production capacity is being directed to export markets. This comes at the expense of producers from other countries, including those based in the port of Rotterdam. An anti-dumping case against China is currently pending at the World Trade Organization on dumping of chemical products. This sharp increase in imports of chemical products from China is also reflected in container statistics. The number of chemical cargo containers imported into Western Europe ('other chemicals & products') increased from 183 thousand to 251 thousand in the period 2020-2022: 37% growth expressed in TEU. For Dutch imports of chemical products, the increase was as much as 77% in terms of the value of this freight in the period 2020-2022 (source: Port of Rotterdam).

58 European Chemical Industry Council, 'The European Chemical Industry: Facts and figures 2023. A vital part of Europe's future', 23 February 2023.

59 Patricia Nilsson, 'BASF to downsize "permanently" in Europe', *Financial Times*, 26 October 2022.

The R&D Centre of Excellence established by Chinese chemical company Jiahua Chemicals at the Plant One test facility at the Port of Rotterdam in 2020 is an exception. However, this is a test facility, not a large-scale production facility: the company wants to gain knowledge of technological trends in Europe in the chemical industry. Jiahua Chemicals focuses on sustainability: it wants to understand biosurfactants, the use of lignin as a raw material and develop knowledge on CO_2 capture and utilisation.[60] Jiahua Chemicals thus openly states that it is coming to Rotterdam to pick up knowledge. Its overt nature and focus on sustainability may be the reason why its arrival has led to little fuss.

Waste processing

Outside the chemical industry, waste processor AVR is a relevant company in the port of Rotterdam as it is owned by Hong Kong-based CK Hutchison Holdings, also the owner of ECT. AVR was acquired in 2013 by Cheung Kong Holdings, also from Hong Kong, which merged in 2015 with Hutchison Whampoa – owner of ECT – to form CK Hutchison Holdings. The relationship of Hong Kong-based companies with the Chinese state has already been discussed in Section 1. Interestingly, AVR's takeover of Amsterdam waste processor AEB has been prohibited by the Netherlands Authority for Consumers and Markets (ACM) due to the combination's excessive market power in the Netherlands.[61] The two companies combined would go on to take a 60% market share of the Dutch market. The ACM applied a regional perspective here related to the assumed negative impact from this market power – in particular due to expected higher transport costs. This regional perspective was not adopted by the ACM with regard to ECT, which was allowed to take over the APMT-Rotterdam terminal, giving it a 65% market share in the port of Rotterdam (excluding Navigator Investco's share).[62]

AVR is highly relevant to the port of Rotterdam because of its involvement in circular initiatives by separating waste and extracting plastics from household waste – a raw material for the chemical industry. It also supplies CO_2 to greenhouse horticulture and generates its own electricity through a biomass

60 Petrochem, 'Chinese company works on sustainable technologies in Rotterdam', Plant One, no. 1 (2021): 20.

61 Thijs Niemantsverdriet, 'Acquisition of Amsterdam waste processor AEB may not go ahead', *NRC*, 23 May 2023.

62 'Parent company ECT may acquire container terminal from APM Terminals (merger decision)', *Netherlands Authority for Consumers and Markets*, 26 October 2020.

power plant. It allocates heat from this plant for district heating. As a specialised service provider in complex waste flows for the port, AVR is a key enterprise.
It also plays an important role in the energy transition and the circular economy, a role it has continued to play proactively after its acquisition by Cheung Kong.

4 Sanction scenarios and changing freight flows

Summary

- *This section examines the **possible impact of Chinese sanctions** against the Netherlands and/or the EU on freight flows, using two scenarios. In the first scenario, the Netherlands is affected by **Chinese sanctions**, where an **export ban** on Dutch goods would have the strongest negative impact. The port of Rotterdam will notice this damage **less** in absolute terms because port-related services are associated with lower added value than production. Should additional Chinese container flows be diverted to other COSCO terminals in Europe – and that is quite possible with transit flows – the port will feel it **strongly**.*
- *A second scenario discusses **EU sanctions targeting China** during a Taiwan crisis. This could lead to geo-economic fragmentation in which the global economy breaks down into two fragmented systems: one around the sphere of influence of China and related countries, and one around the US and Europe and related countries. In the event of a crisis in Asia, there is a **very big impact on the port of Rotterdam and port dues**, partly because of its dependence on China.*
- *Furthermore, three **structural changes in freight flows** relevant to China and Rotterdam are described. Firstly, the impact of **Chinese re-routing** on freight flows, highlighting that transport related transit flows are highly fluid and volumes can shift significantly on a regular basis.*
- *Secondly, developing an **alternative production infrastructure in Asia** ('Altasia') as an alternative to China. In the coming years, freight flows to and from China will gradually decline and the share of Altasia will grow.*
- *Thirdly, **declining Chinese influence in inland ports** and other elements of the hinterland, the most high-profile example being Duisburg.*

Sanction scenarios

Below we describe some fictitious scenarios that offer insight into the relationship between sanctions and the volume of freight flows passing through Rotterdam. These scenarios are based on indicative estimates by the research team and do not follow from a formal scenario study, as published for example by the Port of Rotterdam Authority in 2022. Sanctions can go two ways: sanctions by China or sanctions against China. Sanctions usually have a negative impact on both sides: the countries imposing sanctions and the countries against whom the sanctions are directed – as is now evident with the sanctions imposed on Russia.

Chinese sanctions on the Netherlands for supplying advanced weapons technology

The first scenario involves sanctions from China where only the Netherlands is affected, leaving other countries within the EU unaffected. This could be because Dutch companies supply high-end electronics to companies in Taiwan, needed for the development of advanced defence products, e.g. to build submarines. In this scenario, the Dutch government issued an export licence for these products under heavy US pressure.

If China wants to punish the Netherlands, an export ban on Dutch goods to China would have the strongest negative economic impact for the Netherlands. This is because exports are the biggest contributor to the Dutch economy. The assumption in this scenario is that the Dutch economy is not unique and these lost export flows will not be an insurmountable risk for the Chinese economy. Under such an export ban, the various exporting sectors in the Netherlands are hit especially hard in absolute terms. The port of Rotterdam will notice this damage less in absolute terms because port-related services are associated with lower added value than production (transit cargo in particular has a relatively low added value).

This export ban mainly affects the transport of high-end electronics and equipment, most of which are transported from the Netherlands to China by air, and to a lesser extent export flows via the port of Rotterdam. The total value of freight transported by sea was 7.2 billion dollars and 138 thousand export containers (TEU). In Table B1 in Annex 3, total Dutch exports to China for 2021 were set at 22.0 billion euros, of which 5.2 billion euros were exported in a containerised manner, according to Statistics Netherlands (CBS).

The aforementioned 138 thousand TEU associated with Dutch exports expressed in full containers is very limited – even if it were, say, 200 thousand containers, given the expected continued growth. These 200 thousand TEU make up about 3% of the total Asia volume handled at the port of Rotterdam. China has a 78% share of this (2022). If this volume is eliminated, and it is distributed proportionally to Rotterdam's deepsea container terminals, capable of handling very large container ships, it means a decrease in port fees of about 0.3 million euros. This is assuming 2022 revenues.

Additionally, China may seek to divert container cargo to Chinese-controlled terminals at other ports in the European port network, as shown above in Figure 2 for the relationship between Antwerp-Zeebrugge and Rotterdam. However, this is not possible for all cargo, as much of the cargo is related to Dutch consumption and use in re-export distribution centres at locations near the port of Rotterdam. This in turn would put Chinese activity at a disadvantage because of substantially higher inland transport costs. However, for the substantial transit flows (Annex 3) from China, this is possible because the main destination of these flows is a market area where competition from the North German ports, Antwerp and Rotterdam plays a role. Transit involves a very significant proportion of Chinese cargo: just over half of incoming transit. That means that about half of the Chinese cargo is eliminated in Rotterdam. This has a very large impact on port dues because of the large volume of transit and, partly because of the substantial feeder flows that are also eliminated, could amount to about a third of revenues from port dues related to the deepsea terminals (some 28%, or over 25 million euros). As stated earlier: for the Dutch economy as a whole, this diversion of flows has less significance due to the limited added value of transit operations.

EU sanctions on China after widespread crisis in Asia

A second scenario is a military operation by China targeting Taiwan, with parallels to the Russian invasion of Ukraine. If that takes place, there is the potential for the emergence of a very large-scale crisis that would affect the entire global economy. Rhodium Group estimates that the global disruption caused by a Taiwan conflict would hit at least 2 trillion dollars in economic activity, not to mention the impact of sanctions.[63]

63 Charlie Vest, Agatha Kratz and Reva Goujon, 'The Global Economic Disruptions from a Taiwan Conflict', *Rhodium Group*, 14 December 2022.

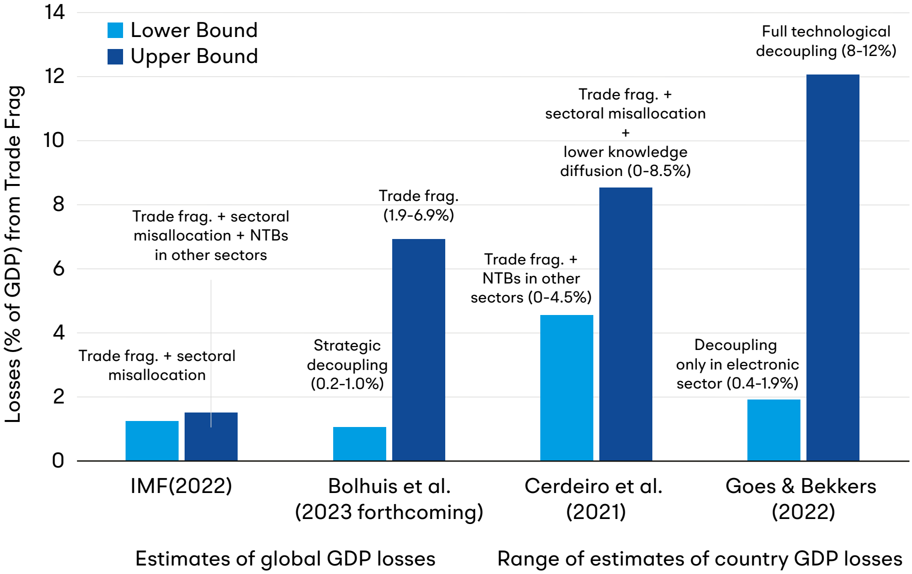
If the EU were to declare a boycott of Chinese products, it would potentially have a much greater impact than the impact on energy prices, such as from the invasion of Ukraine. China's exports consist of a completely different product range than Russia's and – given the large number of consumer products (see Annex 3) – will strongly affect the daily consumption of the average Dutch consumer. It is therefore expected that such a broad sanctions package will not be implemented, but will instead involve 'technological decoupling': no longer buying high-end technological products from China and no longer supplying such products, such as imports of equipment and machinery related to 'semiconductors' – a freight group that, specifically in recent years, has increased sharply in terms of Chinese containerised cargo imports into the Netherlands and Europe (Annex 3). China could also impose countermeasures, also stopping certain goods from being exported – including rare earth metals, such as the licensing requirement announced by China in early July 2023 for exports of the rare earth metals gallium and germanium – metals that, incidentally, are not yet seen as particularly critical.[64]

Given the ambiguity of such a scenario, there is currently talk of geo-economic fragmentation in which the global economy breaks down into two fragmented systems: one around the sphere of influence of China and related countries, and one around the US and Europe and related countries. The IMF has written a report outlining the impact of such fragmentation of the global economy.[65] The report presented some studies and mainly looked at the long term. It shows that the loss of gross national product of the global economy and of different countries can be very significant in the long run, depending on the nature of the fragmentation. Complete technological decoupling is the most dramatic (Figure 4).

64 Mark Beunderman, 'China-US export restrictions curtailing international free trade', *NRC*, 4 July 2023.

65 Aiyar et al., *Geoeconomic Fragmentation and the Future of Multilateralism*, (Washington: International Monetary Fund, 2023).

Figure 4 Quantifying loss of output due to geo-economic fragmentation



Source: IMF

The studies outlined in the IMF report look at the long term – such as the impact of reduced technology diffusion – and then show a very strong impact, which for individual countries can be as much as an 8-12% decline in national product and for the global economy almost 7% (Figure 4). However, the short-term impact could be even more severe: a very potent economic crisis will occur with initially large shortages of a multitude of everyday products now coming from China. Assuming the dominance of Asian cargo in the port of Rotterdam – accounting for 9.9 million TEU in 2022 – container volumes will fall by several million in such a situation. The process of geo-economic fragmentation and rebuilding will also take many years, due to the presence of strong supply networks in China, which need to be rebuilt elsewhere.

Besides technological decoupling, the Chinese banking system can also be blocked as a sanctioning tool: first and foremost, China's central bank, but also the four major commercial banks owned by the Chinese state. Besides the strong impact on investment and financial flows of Chinese assets abroad, a recent study estimates that at least 2.6 trillion dollars in costs for trade in goods and services regulated by Chinese banks would also be affected in the event of such a blockade.[66]

The impact on the port of Rotterdam and port dues is very high in the event of a crisis in Asia. From the trade flows shown in the previous section, which continue to increase, it can be concluded that dependence on China has increased significantly. The Dutch economy has become increasingly dependent on China, without developing alternatives to it. The port of Rotterdam is facilitating this development.

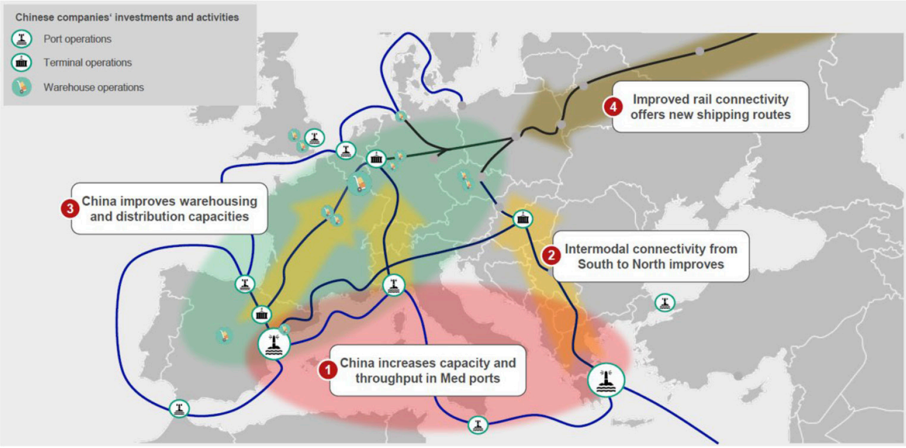
The impact on freight flows through re-routing, production leaving China, or greater Chinese influence on other elements in the hinterland

Understanding the maximum proportion of freight flows that could be lost due to re-routing by Chinese actors to other European ports

German agency Sinolytics presented a Chinese logistics map of Europe (Figure 5). Noticeably missing from this map is a connection from Rotterdam to Duisburg. The map does give an idea of terminal operations, and connections from Europe. The multitude of Chinese terminal initiatives in Europe (see Figure 10) allows current flows from China of over 6 million TEU to be distributed among the multitude of alternative terminals in northern, southern and western Europe (see also above). One area of concern, however, is the use of 24,000 TEU vessels, for which Rotterdam has major advantages. It will mean greatly increased congestion at ports such as Antwerp and Hamburg, as well as on hinterland transport. Re-routing by rail between Europe and China is problematic for many Western shippers for the time being due to the war in Ukraine.

66 Agatha Kratz and Charlie Vest, *Sanctioning China in a Taiwan Crisis: Scenarios and Risks*, (Washington: Atlantic Council and Rhodium Group, 2023), 11.

Figure 5 Logistics map of Chinese logistics investments and activities



Source: Sinolytics

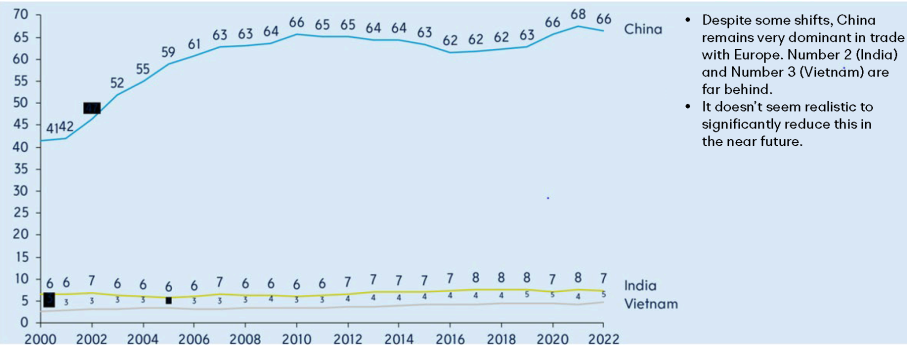
The depiction of import and export, re-export and transhipment flows (see Annex 3) shows that transport transhipment is highly fluid and the volume can shift significantly on a regular basis. This involves some 20% of total container volumes from China. The shift between Zeebrugge and Euromax (Figure 2) is additionally indicative of the volatility in feeder packets, which can account for around 40% of container throughput. However, this feeder transport in turn has a positive impact on port tariffs due to double handling.

Normally, it will be more difficult for 'captive cargo' to shift than it is for transhipment, as we noted above. This includes imports from China for use within the Netherlands, for re-export and for export from the Netherlands: about half of the cargo.

Understanding the impact on freight flows to Rotterdam of the departure of production from China to other countries due to geopolitical tensions

The Port of Rotterdam Authority presented a chart showing China's continued dominance in the Asia trade (Figure 6). As of 2010, China's share of the Asia trade of full import containers to Western Europe was around 66%. The fact that countries like Vietnam and India are way behind this is correct. On the other hand, it could also be argued that these countries are able to piggyback on the very strong growth of total Asian trade flows and will maintain their share in the event of very strong growth of China in the total. Additionally, the unique circumstances related to the impact of COVID-19 also strengthened China's position back to a peak of 68% in 2021 in its share of Asian trade.

Figure 6 China's share of Asia trade (excl. the Middle East and Australia): full import containers to Western Europe



Source: Port of Rotterdam

Currently, an alternative logistics-industrial infrastructure is developing around China, which The Economist calls 'Altasia' (Figure 7): alternative production sites for production in China. Geopolitical tensions as well as changing labour costs and other inputs are important drivers.

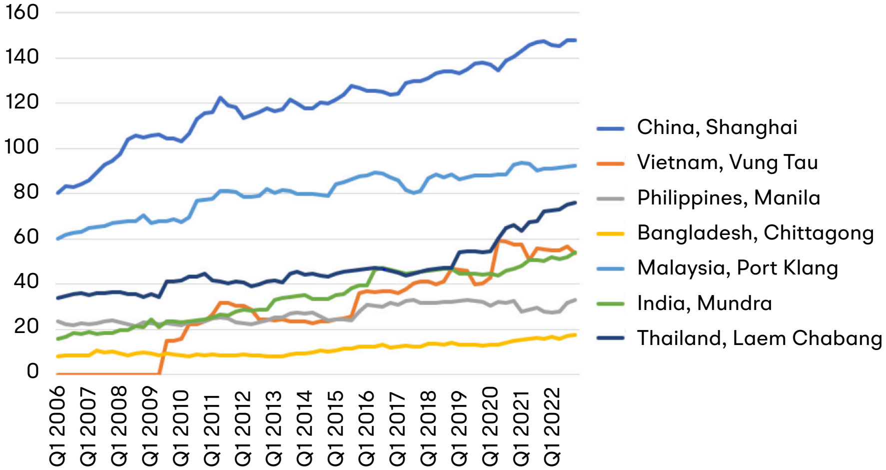
A key indicator is the development of maritime connectivity of these Altasia countries: to what extent are they becoming part of the global maritime-logistics network? UNCTAD has developed the 'Port liner-shipping connectivity index' for this purpose (Figure 8). In general, the connectivity of these countries by sea is slowly increasing, with ports gaining sizeable terminals and new ports emerging. However: many of these new ports are unable to accommodate the largest 24,000 TEU vessels, so they either have to use feeder services or smaller vessels. The increasing connectivity of Chinese ports such as Shanghai (Figure 8) is therefore partly explained by its connection to many new Asian container ports.

Figure 7 Altasia: alternative to production in China[67]

Another key indicator of Asia’s changing dynamics is the large share of intra-Asia trade. Of the 122.6 million TEU handled in Asia in 2022, 38% were intra-Asia; a percentage that grew much faster than imports and exports in recent years. This signifies an increase in internal supplies in Asia, compared with imports and exports to the rest of the world. Intra-European container shipments accounted for only 16.4% of total transhipment in 2022 – and actually declined faster than imports and exports.

67 ‘Global firms are eyeing Asian alternatives to Chinese manufacturing’, *The Economist*, 20 February 2023.

Figure 8 Port liner-shipping connectivity index: largest ports in selected Altasia countries



Source: UNCTAD

Thailand, Vietnam and Malaysia, as well as India, show an increase in maritime connectivity in recent years. Bangladesh and the Philippines are lagging behind for now. The pace of their inclusion in the global economy and in production networks for global value chains is steady. Assembly, for example, is outsourced from China, but suppliers of crucial components are still in the economic hotspots, such as Shenzhen. These shifts in existing activities are very gradual processes. However, new activities, such as production of electric cars and batteries, and chip factories are developing much faster. These examples of economic activities considered essential for the development of strategic autonomy arise mainly on greenfield sites.[68]

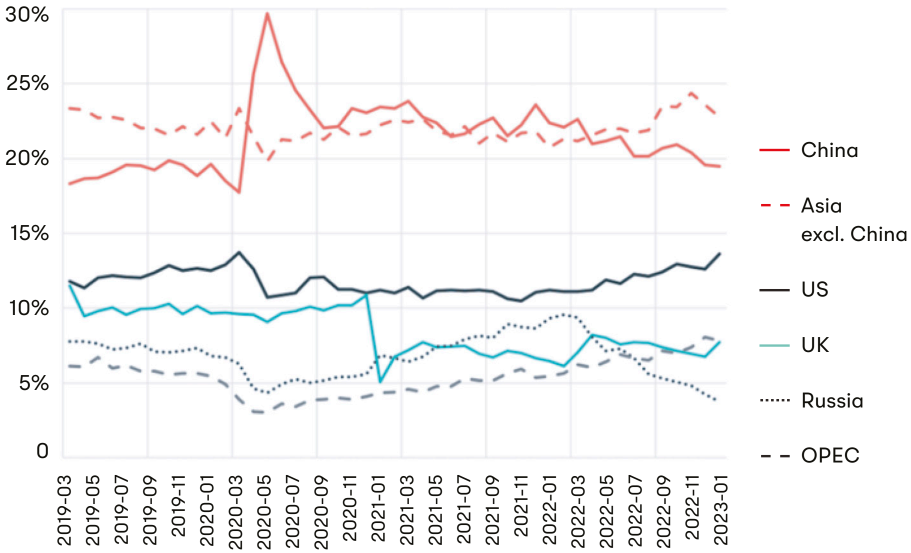
Freight forwarder Flexport (www.flexport.com), meanwhile, does observe the rise of Altasia countries at the expense of China, and also states that this process was underway before COVID-19 (Figure 9). Additionally, there are signals that there is currently a shift, with high-end electronics and equipment for the European market being imported more from the US, at the expense of China, precisely for

68 See, for example: Mark Middel, 'Hungary bets on battery production – with China's help, villagers furious', *NRC*, 14 June 2023.

geopolitical reasons. China is said to focus even more on exporting consumer goods rather than goods for the professional market.

It may be concluded that an alternative production infrastructure is slowly developing in Asia as an alternative to China. There are already some weak signs that indicate this. However, this is happening at a slow pace. In contrast, the regionalisation of strategic sectors such as batteries, electric cars and chip factories is occurring much faster. In the coming years, freight flows to and from China will gradually decline and the share of Altasia will grow. First there will be a high proportion of products built from Chinese parts, 'Made in Altasia'.

Figure 9 Extra-EU 27 supplies: source countries as share of EU imports



Understanding the impact on freight flows to Rotterdam of greater Chinese influence in inland ports/other hinterland elements

In 2021, the strategic role of Duisburg as a hub in the New Silk Road was investigated.[69] This research was driven by the strong growth of freight traffic in Duisburg and Duisburg as a hub between the northern German ports,

69 Bart Kuipers & Niels van Saase, *Duisburg: New mainport as competitor to Rotterdam mainport?* (Rotterdam: Smartport, 2021).

Mediterranean seaports and rail links from China (Figure 5). The hypothesis was that Duisburg would become a new 'gateway to Europe': a gateway of goods coming from the Far East and especially China; mostly high-end goods like car parts and electronics. Duisburg aspired to become 'Germany's most Chinese city' and invested heavily in logistics sites and terminal projects. The 'Duisburg Gateway Terminal' stood out: a very extensive rail terminal to be developed by duisport together with Chinese state-owned shipping company COSCO Shipping Logistics, Hupac SA and the Dutch HTS Group.

Meanwhile, developments in Duisburg have moved into a significantly lower gear due to a number of developments.

- Declining container transhipment in duisport by as much as 7% in 2022.[70]
- Decreasing importance of volumes entering via Russia over the New Silk Road:[71] for many Western shippers, it is not an alternative to route freight flows via Russia (and the same goes for the Northern shipping route, relying on Russia to sail in convoys). The alternative routes that have been developed are less attractive and it is more difficult for them to compete with sea or air routes.
- Duisport's new CEO: Markus Bangen replaced long-serving CEO Erich Staake two years ago and has a significantly weaker China profile than his predecessor.
- There is an overall change of tone and sentiment in Germany in its relationship with China, as illustrated by the discussion around the Tollerort terminal in Hamburg. The departure of COSCO as a partner in the Duisburg Gateway Terminal is also said to be directly related to this change in sentiment and the social debate in Germany.[72]
- Due to Russia's changing position, ambitious terminal plans by duisport in Belarus (Minsk) have been abandoned.

BTT Terminal of Versteijnen in Tilburg is the most notable terminal in the Netherlands with connections in China. Little is reported on developments related to China by BTT on its website or in the media. Sentiment in Tilburg

70 Judith Stalpers, 'Despite decline at the port, Duisburg satisfied with 2022', *Scheepvaartkrant*, 20 April 2023.

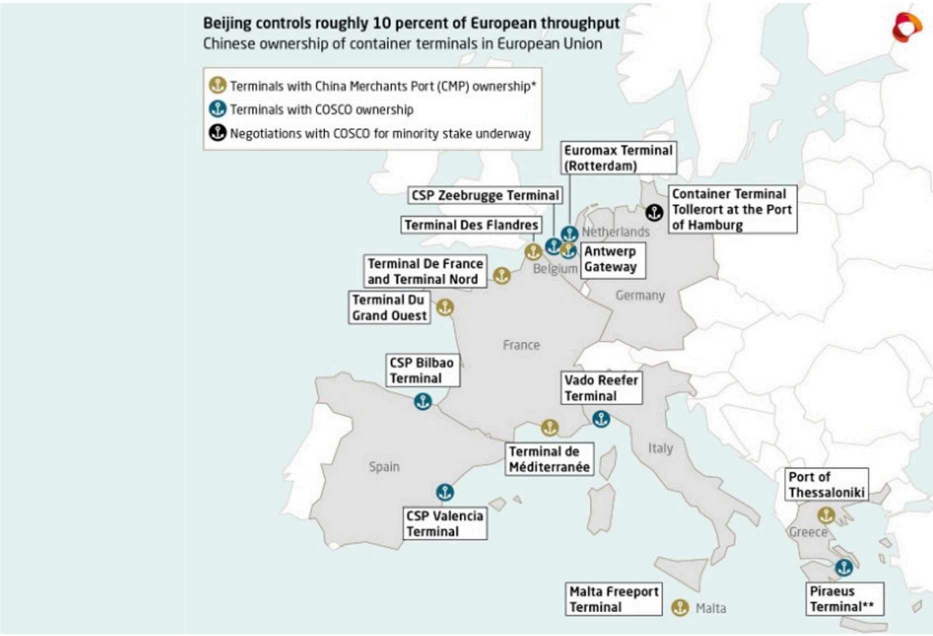
71 Simone van der Lee, 'New Silk Road volumes via Russia down again', *Nieuwsblad Transport*, 23 May 2023.

72 'COSCO no longer appears to be a partner in Duisburg Gateway Terminal project', *Scheepvaartkrant*, 25 October 2022.

might be comparable to Duisburg. Elsewhere in Europe, relations with China are also on the back burner. For example, Italy is considering formally withdrawing from the Belt and Road Initiative and there are several examples of ambitious infrastructure projects being halted.

Regarding the latter component, it can be concluded that China's influence is also declining in the hinterland of the port of Rotterdam, with Duisburg being the most high-profile example. This also extends to the New Silk Road and the Northern Silk Road. Russia's position in relation to the invasion of Ukraine means there are no prospects of reviving these flows in the short to medium term.

Figure 10 Ownership of Chinese state-owned container terminals in the EU



Bron: MERICS

Conclusions

Neither Chinese companies nor the Chinese government have changed their positions towards the port of Rotterdam substantially in recent years. Although Chinese direct investment in the EU in general declined sharply after 2017 and EU and Dutch attitudes towards China simultaneously became more critical, Chinese investments in and around the port have remained significant – and even increased: see the acquisition of KLG Europe in 2019 – and the Chinese government continues to push for good diplomatic relations with the EU and with the Netherlands. A (partial) shift of ownership in the port from Hong Kong to mainland China is possible, and would not lead to any substantial changes in Chinese influence. On the one hand, both Hutchison and the Chinese state-owned enterprises are primarily focused on commercial objectives. On the other hand, they have to take into account the political interests of the Chinese Communist Party. However, there is a degree of differentiation (state-owned enterprises are probably more sensitive to political pressure from Beijing than Hutchison), and especially a difference in perception on the European side. An increased share of Chinese state-owned enterprises at the expense of the Hutchison share – possibly by them taking over the PSA share in HPH – is likely to garner a degree of criticism in the media and political landscape, both in the Netherlands and at the EU level. The potential that the share of Chinese state-owned enterprises within the totality of Chinese interests in the port (i.e. relative to Hong Kong's share) may increase in the future should be factored in.

European and Dutch attitudes towards Chinese influence in European seaports have turned more negative. Five geopolitical factors are key to this change: the US-China relationship, the EU-China relationship, the war in Ukraine, tensions between China and Taiwan, and the COVID pandemic. As a result, the EU and the Netherlands are looking more critically at dependencies on and interactions with China. In this context, the European Commission stresses the importance of de-risking and economic security, as well as revising EU-China policy. While the Commission generally takes a country-neutral approach to instruments, there are calls from the European Parliament for a 'China-centric' approach. A similar dynamic is playing out in the Netherlands between the Lower House and the current Cabinet. As a consequence, legislation is changing too, and policymakers are working on the toolbox of instruments to enhance strategic autonomy.

Legislation focuses mainly on limiting future influence and dependencies, but this does not preclude new legislation that will affect already existing partnerships with China.

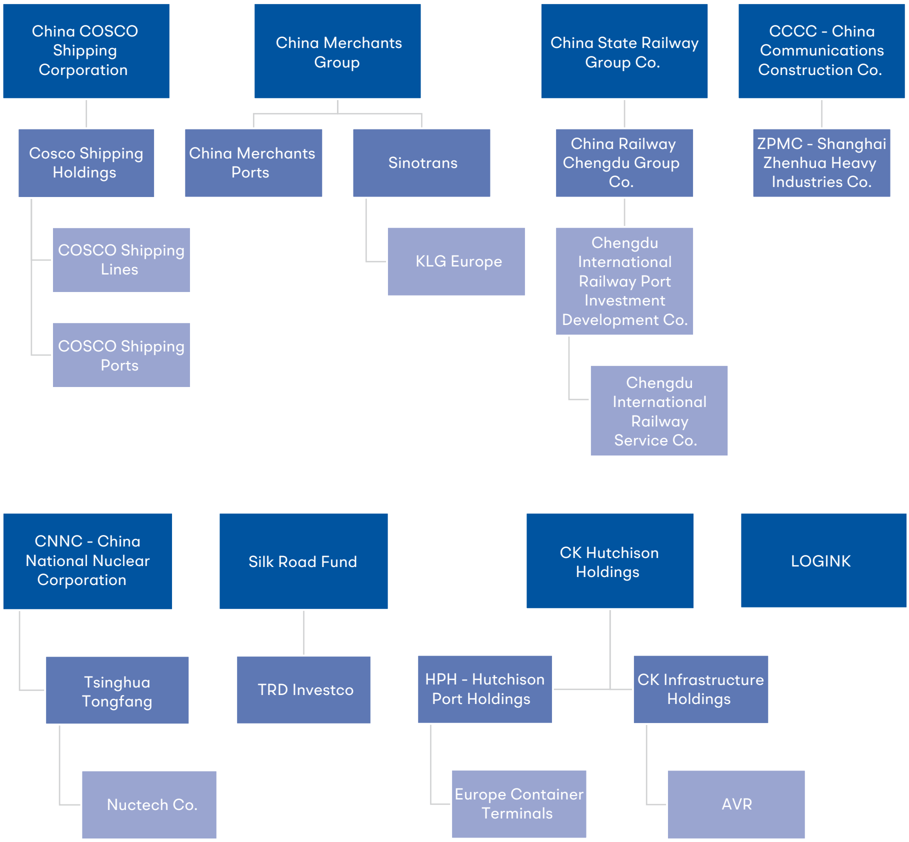
The importance of Chinese cargo for the port of Rotterdam and the Dutch economy has increased significantly. Besides imports and exports, it involves transit and re-export flows. This increase is not reflected in a similar increase in the impact of Chinese activity in logistics in the Netherlands. **The increased importance of Chinese parties is particularly visible in container handling.** The possibility of Chinese actors acquiring a larger share of Europe's chemical sector seems limited, due to commercial considerations and geopolitically-motivated restrictions. Additionally, the level of FDI from China has fallen sharply. The relevance of China for chemical activities at the port of Rotterdam is mainly related to the difference in level playing field between producing in China and the Netherlands and the fact that China is currently dumping chemical products on the world market due to lower demand at home.

Should China impose import restrictions against the Netherlands in a scenario as discussed in this report (in retaliation for Dutch exports to Taiwan of military-relevant technology), the impact on freight flows through Rotterdam would probably not be significant. Expressed as port dues, the decrease would be estimated to be around 0.3 million euros (assuming 2022 revenues). Should Chinese container flows be diverted to other COSCO terminals in Europe as an additional retaliatory measure – and this is especially possible with transit flows – the port of Rotterdam will feel it strongly with a decrease of around 25 million euros in port dues. On the other hand, if China-related freight flows are completely eliminated (which is more likely in a major geopolitical crisis in Asia than because of targeted sanctions against the Netherlands alone), the impact on the port of Rotterdam and port dues could be very large. The dependence on China has increased very significantly in recent years and the Dutch economy has become increasingly dependent on China without developing alternatives to it. **Given the dominance of Asian cargo in the port of Rotterdam (9.9 million TEU in 2022), in a crisis situation as outlined in the second scenario in this report, container volumes would decrease by several million.** The extent to which Chinese companies are present in the port as investors appears to be of relatively limited significance for the risk of lost freight flows compared to the extent to which the Dutch economy is dependent on China.

An alternative production infrastructure is slowly developing in Asia, as an alternative to China. The regionalisation of strategic sectors such as batteries, electric cars and chip factories is occurring much faster. In the coming years, freight flows to and from China will gradually decline and the share of 'Altasia' (the countries surrounding China) will grow. First there will be a high proportion of products built from Chinese parts, 'Made in Altasia'. **China's influence in the hinterland of the port of Rotterdam is waning, with Duisburg being the most high-profile example. This also extends to the New Silk Road (rail) and the Northern Silk Road.** Russia's position in relation to the invasion of Ukraine means there are no prospects of reviving these flows in the short to medium term.

Annex 1 Overview of Chinese companies relevant to the Port of Rotterdam

This overview was created based on the text box in Section 1.



Annex 2 Overview of relevant laws and regulations

EU level

Legislation	'Directive on the Resilience of Critical Entities' (CER)[73]
Time line	• Effective: 16 January 2023. • Adopted: 14 December 2022. • Member states have until 17 October 2024 to adapt national legislation.
Relates to	Aimed at protecting critical entities, including in the transport sector.
Legislation	'Network and Information Directive' (NIS2)[74]
Time line	• Effective: 16 January 2023. • Member states have until 17 October 2024 to adapt national legislation.
Relates to	Aimed at improving the digital and economic resilience of European member states.
Legislation	'Foreign Subsidies Regulation' (FSR)[75]
Time line	• Effective: 12 January 2023. • Applicable from 12 July 2023.
Relates to	Targeting foreign subsidies that distort the single market.
Legislation	'EU framework for foreign direct investment screening'[76]
Time line	• Applicable since 11 October 2020. • Follows FDI screening regulation adopted in March 2019.[77]
Relates to	Focuses on cooperation among EU member states to screen FDI affecting European security and public order.

73 European Commission, 'Critical infrastructure resilience', consulted on 5 July 2023.

74 National Cybersecurity Centre, 'What will the NIS2 directive mean for your organisation?', consulted on 5 July 2023.

75 European Commission, 'Foreign subsidies regulation', consulted on 5 July 2023.

76 European Commission, 'EU foreign investment screening mechanism becomes fully operational', 9 October 2020.

77 European Parliament and the Council, *Establishing a framework for the screening of foreign direct investments into the Union*, Regulation 2019/452 (19 March 2019).

Netherlands level

Legislation	Dutch 'Vifo Act: Security Screening of Investments, Mergers and Acquisitions'[78]
Time line	• Effective: 1 June 2023. • Adopted by the Lower House on 19 April 2022, by the Upper House on 17 May 2022 and by the Cabinet in December 2022.[79] • The Act is in effect retroactively to 9 September 2020.
Relates to	Aimed at laying down rules by which risks to national security, resulting from certain acquisition activities such as investments and mergers, can be controlled.

Upcoming laws and regulations

Legislation	'Anti-Coercion Instrument' (ACI)[80]
Time line	• On 6 June 2023, the European Parliament and the Council reached a political agreement on ACI. • Proposed by the European Commission in December 2021. • Expected to take effect in autumn 2023, after procedures for approval have been completed.
Relates to	Aimed at protecting the EU from economic coercion by third countries.
Legislation	Update of 'EU Maritime Security Strategy' (EUMSS)[81]
Time line	• On 10 March 2023, the European Commission published a 'Joint communication on the update of the EU Maritime Security Strategy and its Action Plan: An enhanced EU Maritime Security Strategy for evolving maritime threats'. • A 'Working Party on Maritime issues' in the Council of the EU is currently discussing the update of the EUMSS.[82] • The EUMSS went into effect in 2014. • The action plan was last reviewed in 2018.
Relates to	A maritime security strategy. In May 2023, the Ministry of Infrastructure and Water Management indicated that discussions could include 'to what extent it is necessary to develop a separate port strategy or whether the subject could, for example, be accommodated in the European Union's maritime security strategy'[83]

78 Upper House, 'Security Screening of Investment, Mergers and Acquisitions Act', 30 June 2021.

79 Central Government, 'Decision on security screening for investments, mergers and acquisitions to Council of State', 23 December 2022.

80 European Commission, 'Political agreement on new Anti-Coercion Instrument to better defend EU interests on global stage', 6 June 2023.

81 European Commission, 'Maritime security strategy', 10 March 2023.

82 European Commission, 'Maritime security strategy', 10 March 2023.

83 Lower House, 'Status of outstanding motions and commitments and some relevant files related to maritime affairs', 23 May 2023.

Legislation	Revision of 'TEN-T Regulation 2013'[84]
Time line	• In December 2021, the European Commission submitted a proposal to revise the TEN-T regulation. • In July 2022, the European Commission submitted an amended proposal in response to the war in Ukraine. • The Council published its position in December 2022; the European Parliament's position has not yet been published.[85]
Relates to	Aimed at building an effective transport network in the EU, identifying infrastructure with high added value at the European level. Negotiations on national security conditions and the inclusion of non-European companies in the network are ongoing.
Legislation	Dutch 'Aanpak Vitaal [Vital Approach] 2023-2028'[86]
Time line	• Draft laws and regulations are expected to go out for consultation at the end of 2023.
Relates to	'To continue protecting vital processes from new threats, the government is working on a future-proof, strengthened approach.' This approach is integrated, with commitment to strengthening the resilience of vital infrastructure.

84 European Commission, 'TEN-T Revision', consulted on 5 July 2023.

85 European Parliament, 'Trans-European transport network', COD 2021/0420, consulted on 5 July 2023.

86 Lower House, 'Committee debate on maritime affairs', 30 May 2023.

Annex 3 Analysis of freight flows

When we break down supply chains related to trade with China passing through the port of Rotterdam, there are three types of chains. Firstly, this relates to freight flows related to imports and exports of the Dutch economy. Research on the economic significance of seaport areas[87] shows that the flows related to 'exports of Dutch products through the port of Rotterdam' are by far the most important in terms of the extent of the added value realised for the Dutch economy (38.8 billion euros in 2018). In addition, this relates to transit and re-export flows. With an added value of 4.8 billion euros (2018), these re-export flows – in which products imported into the Netherlands are usually stored in a distribution centre, only to be re-exported to other countries in Europe – are significantly less important than the flows related to exports. With an added value of around 2 billion euros, for transit flows, the economic importance is even lower.

87 Oscar Lemmers et al., Economic significance of seaport areas: *Location function, hub function and trade-flow function*, (Statistics Netherlands (CBS) and Erasmus UPT, 2022).

Table B1 Value of Dutch trade in goods with China by type of freight flow, in billions of euros, 2007 and 2021. Breakdown of total Chinese trade for all modes of transport versus containerised Chinese trade via maritime transport, in billion euros and average annual growth rate in percent. Italics: share of trade with China in total trade (all countries) by freight flow.

	2007		2021		CAGR	2007		2021		CAGR
	Total flows (all modes of transport)					Containerised flows (maritime transport)				
Imports from China		%		%	%		%		%	%
• domestic use	12,5	*7,0*	34,5	*11,6*	7,5	5,0	*25,1*	22,2	*40,2*	11,2
• imports for re-export	17,6	*14,9*	36,6	*18,4*	5,4	5,4	*27,4*	24,5	*43,8*	11,4
Exports to China										
• export Dutch product	4,8	*2,5*	22,0	*7,4*	11,5	1,7	*7,7*	5,2	*12,6*	8,3
Incoming transit China-related goods										
• incoming transport transit	17,8	*10,6*	35,4	*10,0*	5,1	8,8	*13,9*	21,5	*13,2*	6,7
• incoming quasi-transit	12,4	*24,0*	46,0	*44,9*	9,8	4,2	*80,9*	31,2	*95,1*	15,4

Source: Statistics Netherlands (CBS) Statline: International trade and transhipment: value, weight, goods, mode of transport

How should we assess Dutch trade with China based on these three categories? In Table B1, imports from China[88] are distinguished by import/export, re-export and transit for the value of both total freight flows for all modes of transport (i.e. including air and maritime transport) and for only containerised goods transported by sea, almost all of which involve Rotterdam as a container port. It also includes exports to China of 'Dutch products'. These flows were assessed for 2007 and 2021 – the latter year currently being the most recent available in the statistics of Statistics Netherlands (CBS). Table B1 shows the absolute values for trade with China and also the percentage share of China in total

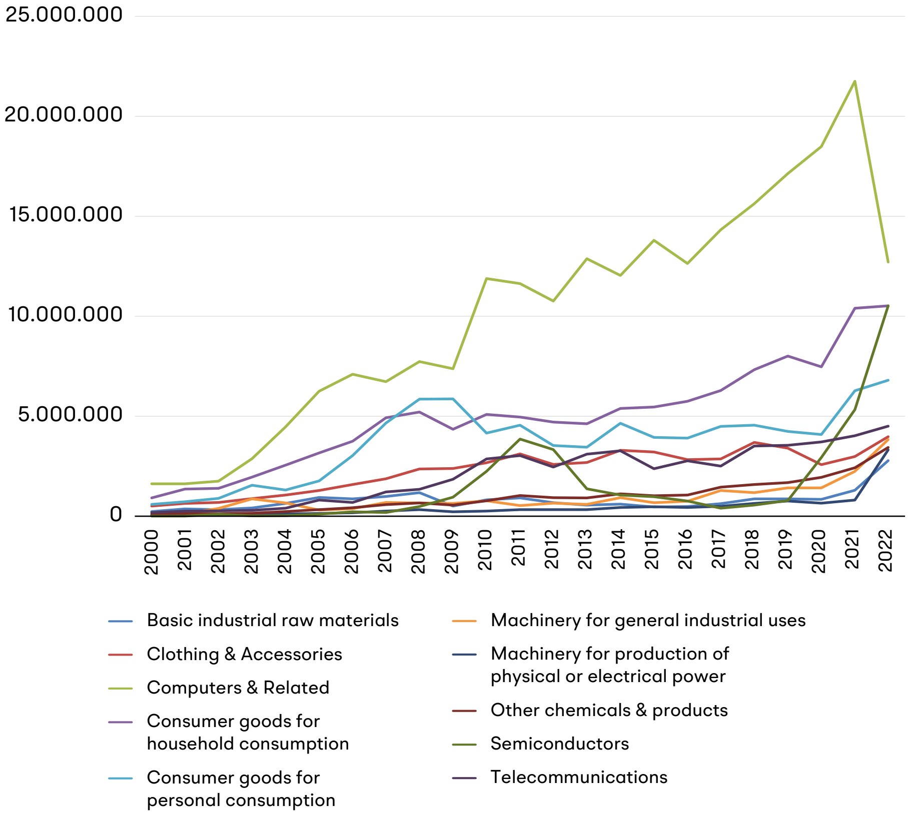
88 China is merged here with Taiwan, Hong Kong and Mongolia. Taiwan's container flows are very small compared to China, the flows related to Hong Kong are strongly related to the Chinese economy and to a very large extent re-exports between Hong Kong and the Chinese economy. For Taiwan, air freight is relatively more important, related to the high-end nature of the cargo.

Dutch trade. The same was done for containerised trade transported by sea.[89] Average annual growth over the period 2007-2021 is also indicated for total trade and containerised trade transported by sea. It can be concluded that all types of freight flow show strong growth, that containerised flows grow more strongly than total flows – with one exception: flows related to exports of ‘Dutch products’, where air freight plays a very important role.

Below, these Statistics Netherlands (CBS) figures are explained in more detail and we also present figures from the Port of Rotterdam Authority. The Port Authority’s figures are not distinguished by transit or re-export, but in particular give a clear picture of developments in the various freight groups – and include 2022.

89 The total containerised trade is larger, as some arrives in the Netherlands from other ports by road, rail or inland waterway, such as to and from Antwerp, or by rail related to the New Silk Road.

Figure B1 Value of Chinese imports to the Netherlands, ten main freight groups in 2022, in 1,000 US dollars, 2000-2020



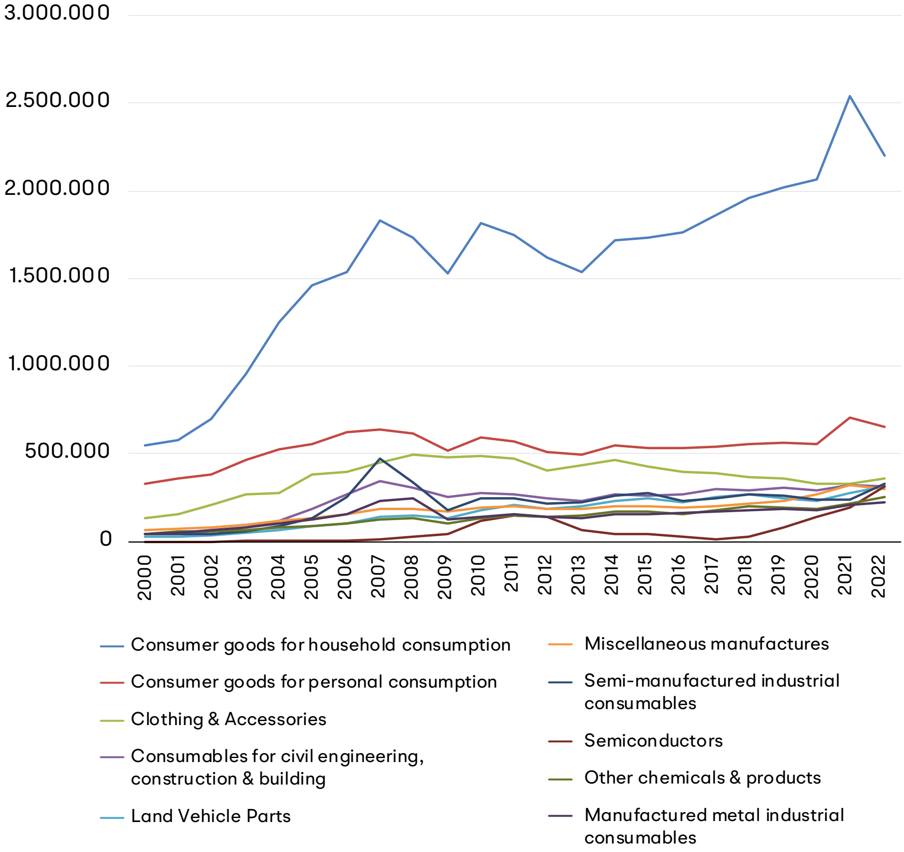
Source: Port of Rotterdam

Imports from China via the port of Rotterdam

The value of maritime imports from China, running through the port of Rotterdam destined for the Dutch economy, totalled 87.6 billion dollars in 2021. A very strong increase compared to pre-COVID 2019, when these imports were only 57.0 billion dollars (figures: Port of Rotterdam Authority, see Figure B1 – including both domestic use and re-exports). The freight group 'computers and related goods' is clearly the most important and partly responsible for the strong growth. Also noteworthy is the sharp decline after the COVID years 2020 and 2021 in the freight group 'computers' – generally explained by strong investments in the previous years, which meant that no new equipment was needed in the short term. This is striking, as most other freight groups are actually growing strongly or at least remaining at similar levels. The transport of semiconductors by container is a very notable area of growth in terms of the value of these goods – but also in terms of the volume of this freight flow: at 36 thousand TEU, it is relatively high. Besides computers, this relates mainly to consumer goods, and telecommunications equipment is also relatively important.

Figure B2 shows imports of full containers to Western Europe passing through the port of Rotterdam. This can be regarded as an overall picture: including imports for the Dutch economy, for re-exports and incoming transit towards various countries in Western Europe. A total of 8.1 million TEU of incoming cargo was involved in 2022: also a strong increase from the 6.7 million TEU handled in 2019. 2021 saw an increase of 1.3 million TEU from China towards Western Europe compared to 2020. This represents a 20% increase in TEU in one year. The value of goods imported into the Netherlands actually increased by 34% in that year. This is an illustration of the exceptional flexibility of China's production infrastructure.

Figure B2 Chinese imports of full containers to Western Europe, in TEU, 2000-2022



Source: Port of Rotterdam

Expressed in number of containers, the significant importance of consumer goods imports for the Western European market is clear: consumer goods for household and personal consumption, as well as clothing, are the three most important freight groups for the Western European market. Besides consumer products, there are a number of industrial freight groups, with semiconductor imports for the Western European market being notable. In 2017, imports amounted to 15 thousand containers; in 2020, this increased to 314 thousand containers.

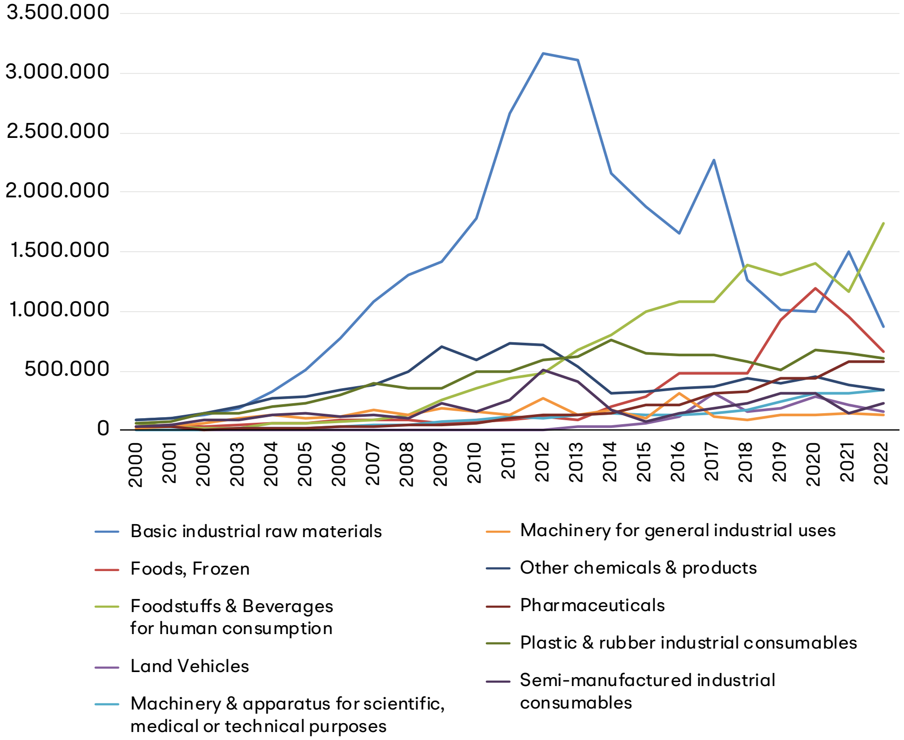
Imports from China for use in the Dutch economy, total and containerised

Total imports from China into the Netherlands for domestic use (Table B1) amounted to 12.5 billion euros in 2007, 7.0% of the Netherlands' total imports for domestic use – comprising both consumer goods and products for industrial applications. These imports from China for domestic consumption increased to 34.5 billion euros in 2021, accounting for 11.6% of the Netherlands' total trade for domestic consumption. This meant an average annual growth rate of 7.5% during this period. The growth of containerised imports by sea-going vessel of goods from China for domestic consumption exceeded the total imports of Chinese goods imported using all modes of transport. There is growth in containerised imports from 5.0 billion euros by sea in 2007 to 22.2 billion euros in 2021: an average annual growth rate of 11.2% in the period 2007-2021. The share of containerised goods originating from China, measured by value, thus increased from 25.2% to 40.2% of all imported goods for domestic use. This has greatly increased the role of the port of Rotterdam as a facilitator of Chinese goods aimed at imports for the Dutch economy. As a source country for supplies and for the origin of consumer goods transported by container, China has thus become increasingly important for the Netherlands.

Exports of Dutch products to China: total and containerised

Exports of 'Dutch products' are also showing strong growth – certainly total exports, which refers to the total package of goods exported to China via all modes of transport. Here, air freight is dominant and mainly involves high-end cargo. As much as 12.8 billion in export value of Dutch products was exported to China by air in 2021, with high-tech ('machinery and equipment') being the main cargo category with a volume of 12.2 billion euros (source: *Statistics Netherlands (CBS) Statline*). As a whole, exports of Dutch products increased from 4.8 to 22.0 billion euros in 2007-2021: an average annual growth rate of 11.5%. The growth of Dutch exports transported by sea container lags behind, growing from 1.7 billion euros in 2007 to 5.2 billion in 2021 but is still a respectable 8.3% on average per year. In 2021, 12.6% of all containerised exports by sea in Rotterdam were related to China.

Figure B3 Value of Dutch overseas exports to China, ten main freight groups, value in 1,000 US dollars, 2000-2022



Source: Port of Rotterdam

If exports are shown at the level of freight groups, the freight group 'basic industrial raw materials' stands out first of all (Figure B3): this mainly concerns the substantial flow of waste paper, plastics and other recyclable waste that came to a standstill under the 'National Sword' policy since 2018, under which China no longer wanted to be the world's rubbish dump. Half of all recycling plastic was transported by sea, and China had a 60% share of it before 2018 – this volume has now been greatly reduced. These goods were mainly transported to China in empty containers (Figure B4).

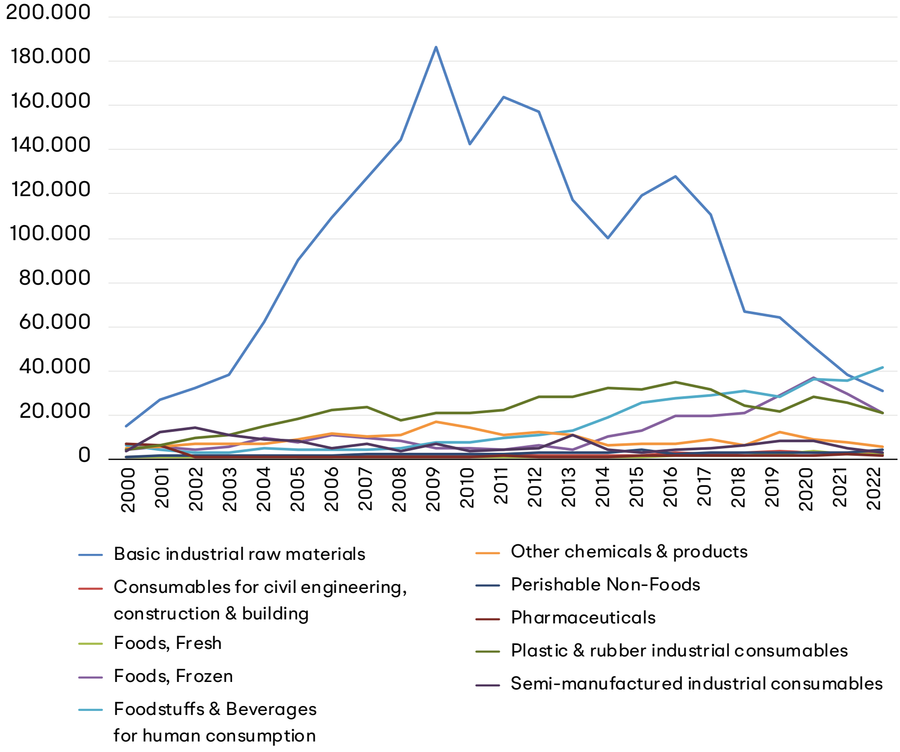
In terms of both value and quantity of containers, foodstuffs is the most important export category from the Netherlands, followed by frozen foods and plastics. Overall, the value of Dutch exports as determined by the Port of

Rotterdam Authority in 2022 amounted to 7.2 billion dollars and involved 138 thousand containers – a decrease compared to 2021 when these values were 7.8 billion and 161 thousand, respectively. High-tech goods still appear in the top 10 goods transported by sea by value – as in the freight group 'machinery & apparatus for scientific, medical or technical purposes' (Figure B1), but no longer in the top 10 numbers of export containers (Figure B4).

Imports from China for re-export: total and containerised

Rotterdam's 'hub function' is divided into two parts: firstly, its relationship with re-exports and, secondly, with transit. For re-exports, it is noticeable that China-related containerised transport by sea becomes relatively more important, compared to re-exports related to total flows and modes of transport. Containerised flows with Chinese goods imported for later re-export grew by 11.4% on average per year from 5.5 to 24.5 billion euros – more than twice as fast as the total amount of goods brought in by all modes of transport (5.4%). China's role as a share of the number of containers related to re-exports was 43.8% in 2021 – so almost half of all containerised re-export cargo came from China. 'Imports for re-export' shows a similar pattern to imports for domestic use: a significantly stronger impact of containerised maritime transport compared to total flows and use of all modes of transport.

Figure B4 Dutch exports to China, ten main freight groups, expressed in volume of full TEU, 2000-2022



Source: Port of Rotterdam

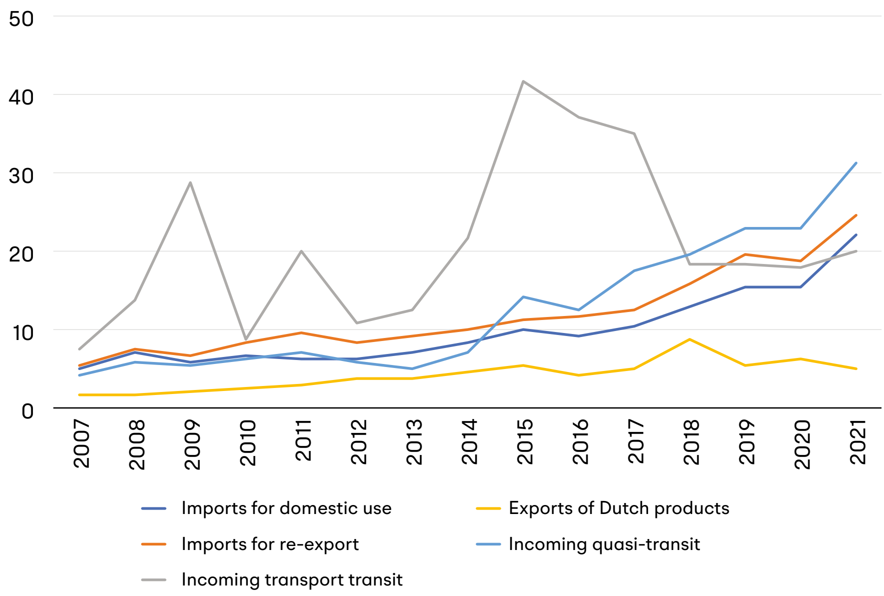
Incoming transhipment from China: total and containerised

Incoming transit is divided into two parts: transport transit[90] and quasi-transit.[91] In transport transit, feeder flows play a relatively important role, while quasi-transit mainly involves inland transport towards the hinterland, e.g. by rail or inland waterway. The pattern of the two flows is very different (Table B1 and Figure B5). In terms of transport transit., China's role in 2021 is relatively limited, both for total flows and for containerised flows via maritime transport, but does show a very erratic trend. In relation to incoming quasi-transit, China's role is strong to very strong – especially assuming containerised flows entering the Netherlands via maritime transport, where China's share of incoming containerised flows towards the hinterland was 95.1% in 2021. This mainly involves containers transiting from Rotterdam to destinations in Germany, such as Duisburg.

90 Incoming transport transit: goods transported across Dutch territory en route from one country to another, transhipped there from one means of transport to another and remaining in foreign possession, but not temporarily stored in a customs warehouse, nor cleared by Dutch customs. These goods may have been under customs supervision throughout their time in the Netherlands, or they had been in free circulation before coming to the Netherlands. Excluded is transport transit without transhipping on Dutch territory. (Source: Statistics Netherlands (CBS) Statline).

91 Incoming quasi-transit: goods that enter the Netherlands and will leave the Netherlands again in an (almost) unprocessed state. A Dutch resident does not become the owner of the goods at any time. In addition, for quasi-transit to exist, one of the following administrative actions must take place in the Netherlands: (a) the goods from outside the EU are cleared on arrival in the Netherlands, (b) the goods leave the Netherlands and the EU and an export document is prepared by customs; (c) the international goods are stored in the Netherlands for at least one day. This makes the owner liable for VAT and requires them to register for VAT. (Source: Statistics Netherlands (CBS) Statline).

Figure B5 Dutch containerised freight flows transported by sea related to China, in billions of euros, 2007-2021, for selected freight flows



Source: Statistics Netherlands (CBS) Statline: International trade and transhipment: value, weight, goods, mode of transport.