

Chinese Investments in European Non-Maritime Transport Infrastructure



Transport and Tourism



Policy Department for Structural and Cohesion Policies
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Chinese Investments in European Non-Maritime Transport Infrastructure

Abstract

This study looks at Chinese investments in non-maritime transport infrastructure in the EU and EU Neighbourhood through the lens of 'de-risking' for the first time. It provides a comprehensive overview of Chinese investments in the European non-maritime transport infrastructure over the past two decades and weighs the associated risks. The study borrows the framework adopted by the *National Risk Assessment of the Kingdom of the Netherlands 2022* for its risk assessment and further develops it to score the impact and likelihood of the investments across five major threat areas: EU-level dependency risk, individual dependency risk, coercion/influence risk, cybersecurity/data risk and hard security risk. The analysis illustrates that the risks remain insufficiently understood by Member States, despite their high likelihood and/or impact. This is particularly true for economic coercion and cybersecurity/data risks.

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LIST OF ABBREVIATIONS

| | |
|------------------|--|
| BILK | Budapest Intermodal Logistics Centre |
| BMI | German Ministry of the Interior |
| BMWK | German Federal Ministry of Economic Affairs and Climate Action |
| BoD | board of directors |
| BRI | Belt and Road Initiative |
| BSI | German Federal Office for Information Security |
| CAMCO | Central Aircraft Manufacturing Company |
| CATL | Contemporary Amperex Technology Co., Limited |
| CBRT | Central Bank of the Republic of Turkey |
| CCCC | China Communications Construction Company |
| CCP | Chinese Communist Party |
| CIC | China Investment Corporation |
| CIMC | China International Marine Containers |
| CMG | China Merchants Group |
| CMP | China Merchants Port |
| CMPH | China Merchants Port Holdings |
| COSCO | China Ocean Shipping Company |
| CPL | COSCO Pacific Limited |
| CRIC | China Railway International Corporation |
| CRIG | China Railway International Group |
| CSPL | COSCO Shipping Ports Limited |
| CSSC | China State Shipbuilding Corporation |
| CTT | Container Terminal Tollerort |
| CXIC | Changzhou Xinhuachang International Containers |
| EBRD | European Bank for Reconstruction and Development |
| EIA | environmental impact assessment |
| EIB | European Investment Bank |
| ENISA | European Union Agency for Cybersecurity |
| EWG | East-West Gate Terminal |
| FDI | foreign direct investment |
| FEIR/IOBE | Foundation for Economic and Industrial Research |

| | |
|---------------------|---|
| FLC | full container load connection |
| HHLA | Hamburger Hafen und Logistik AG |
| HNA | Hainan Airlines |
| HPCS | Hellenic Port Community System |
| HRADF/TAIPED | Hellenic Republic Asset Development Fund |
| ICBC | Industrial and Commercial Bank of China |
| ICT | information and communication technologies |
| M&A | mergers and acquisitions |
| MENA | Middle East and North Africa |
| MEP | Member of the European Parliament |
| MoU | Memorandum of Understanding |
| MSC | Mediterranean Shipping Company |
| NATO | North Atlantic Treaty Organization |
| NIS | Network & Information Systems |
| OEGB | Austrian Federal Railways |
| OEM | Orient-East Med |
| OOCL | Orient Overseas Container Line |
| ORL | Ocean Rail Logistics |
| OSCE | Organization for Security and Co-operation in Europe |
| OSE | Hellenic Railways Organisation |
| OSINT | open-source intelligence |
| PCDC | Piraeus Consolidation & Distribution Centre |
| PCT | Piraeus Container Terminal |
| PEARL | Piraeus-Europe-Asia Rail Logistics |
| PLAN | People's Liberation Army Navy |
| PPA/OLP | Piraeus Port Authority |
| SASAC | State-owned Assets Supervision and Administration Commission of the State Council |
| SEIA | strategic environmental impact assessment |
| SIPG | Shanghai International Port Group |
| SOE | state-owned enterprise |
| SOFAZ | State Oil Fund of Azerbaijan |

| | |
|--------------|---|
| TEN-T | Trans-European Network for Transport |
| TEU | twenty-foot equivalent unit |
| TITR | Trans-Caspian International Transport Route |
| TOS | Terminal operating system |
| UN | United Nations |
| ZPMC | Shanghai Zhenhua Heavy Industries Company Limited |
| ZS | Serbian Railways Corporation |

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EXECUTIVE SUMMARY

SUMMARY OF KEY FINDINGS

- China's investment in Europe's non-maritime transport infrastructure is far smaller than in maritime transport infrastructure. However, **financing infrastructure projects by loans as a part of the Belt and Road Initiative (BRI) or even just providing services along the transport lines** without investing in the EU's TEN-T core network can still allow China to have **significant economic and geopolitical influence**.
- **Risks of China's investment remain insufficiently understood**, despite their high likelihood and/or impact. This is particularly true for economic coercion and cybersecurity/data risks.
- EU Member States are advised to **officially recognise the infrastructure along the TEN-T core network as critical**, and to conduct studies to assess the presence of Chinese companies in the TEN-T core network within their border and risks emanating from such presence.
- Additionally, an **in-depth study on Chinese companies' involvement in software along the TEN-T core network and a risk assessment of cybersecurity/data risk** emanating from its use is recommended.
- Should Chinese investment to the EU Neighbourhood grow further and if China establishes more control of infrastructure in these countries, **the EU's position and influence in the region could be threatened**.
- **The EU would be able to better protect its interests in its neighbourhood if it funds more investments in transport infrastructure in the region**, particularly in candidate and potential candidate countries.

Although maritime routes have traditionally been a major mode of transportation of China's exports to the EU, accounting for roughly 80-85% of all trade volumes between the EU and China, other modes have been increasing in importance.

This study identifies a total of 14 Chinese acquisition deals and 12 announced greenfield investment projects in European non-maritime transport infrastructure during 2007-2021. Acquisitions accounted for the bulk of the capital invested – their total value exceeded EUR 6.7bn, while the value of the capital pledged in the announced greenfield projects stood at about EUR 0.1bn. However, when one accounts for divestment of the acquisitions (primarily in the aviation sector), the value of this type of investment drops to only about EUR 0.9bn.

Investment in non-maritime transport infrastructure is far below that in maritime transport infrastructure. However, it is important to consider the fact that most of the Chinese infrastructure construction projects in the non-EU member countries are financed by loans, and the total value of such deals tends to be multiple times higher than the value of FDI projects – for some countries, the value is equivalent to a significant proportion of their GDP.

The lack of conditionality attached to Chinese funds to finance transport infrastructure projects makes them more attractive for the recipient countries. However, it impacts EU conditionality negatively by reducing the effectiveness of proposed reforms and standards in these countries, particularly in terms of rule of law, social rights, sustainability and environmental protection.

The five case studies – three in EU Member States (Greece, Germany, Hungary) and two in EU candidate countries (Serbia and Turkey) – show that Chinese investments can bring local economic benefits such

as new connectivity routes that decrease transportation costs, and the creation of new jobs. Yet, at the EU level, the benefits are often less clear. If the investments do not unlock real and new demand for imports and exports, the end result, similar to maritime ports, might simply be to redirect existing demand from other transportation routes, thus not creating any positive net impact for the EU as a whole.

The risk assessment of Chinese investments analyses five types of risk: EU-level dependency risk; individual dependency risk of each case; coercion and/or influence risk; cybersecurity/data risk; and hard security risk. The analysis highlights that economic coercion and cybersecurity/data risks are higher and therefore require more attention by the EU and Member States both in terms of preparedness and awareness.

China's Belt and Road Initiative (BRI) can be used as an instrument to gain geopolitical influence in the EU and its Neighbourhood. Threats of coercion over the flow of trade between different European hubs could harm TEN-T projects along those logistics networks. The level of risk appears to be proportional to the investment: the larger the Chinese-owned share of a European infrastructure, the higher the risks and their consequences. Additionally, as the case study on Greece shows, Chinese companies that provide services along the lines can significantly influence trade flows in the region even without investing in the EU's TEN-T core network. As in the case of direct investments, the extent of the influence depends on the size of the presence of the Chinese provider.

In order to be able to manage the risks, a better understanding of the scale of Chinese involvement in the transport infrastructures is needed. To achieve it, the study recommends that all 27 EU Member States commission national studies to assess the presence of Chinese companies in the TEN-T core network within their border and the risks emanating from this presence.

EU Member States should officially recognise the infrastructure along the TEN-T core network as critical infrastructure, and should carry out data collection and risk assessment of all infrastructure within their borders that are part of the core TEN-T. Guidelines need to be developed to ensure that no cargo can travel unchecked within the EU if the shipping company and the intermodal operators all belong to the same non-EU country and/or the same non-EU company.

Awareness and capacity to deal with cyber/data risk is identified as one of the most urgent issues, and one in which the EU and its Member States have poor capabilities. The study recommends commissioning an in-depth study on Chinese companies' involvement in management software and other software along the TEN-T core network and a risk assessment of cybersecurity/data risk emanating from the use of Chinese software. This would provide a strong basis to inform Member States and develop related policies.

Should Chinese investment to the EU Neighbourhood grow further and allow Chinese interests to establish more control over its infrastructure, the EU's position and influence in the region could be threatened. This is especially relevant in the case of Serbia, which could become the most important European hub for Chinese infrastructure investments, alongside the Greek port of Piraeus.

The EU would be able to better protect its interests in its neighbourhood if it funds more investment in transport infrastructure in the region, particularly in candidate and potential candidate countries. Financing can take forms other than direct budget support, such as instruments to reduce risk and the cost of financing, as well as public-private partnerships involving EU firms. It would be advisable to combine financial support with tougher conditionality regarding FDI screening, greater transparency of investment agreements, as well as more rigorous enforcement of labour protection, environmental and other standards. Countries in the EU Neighbourhood need to be encouraged to adopt FDI screening and to link this to recognition of the related transport infrastructure as critical infrastructure.

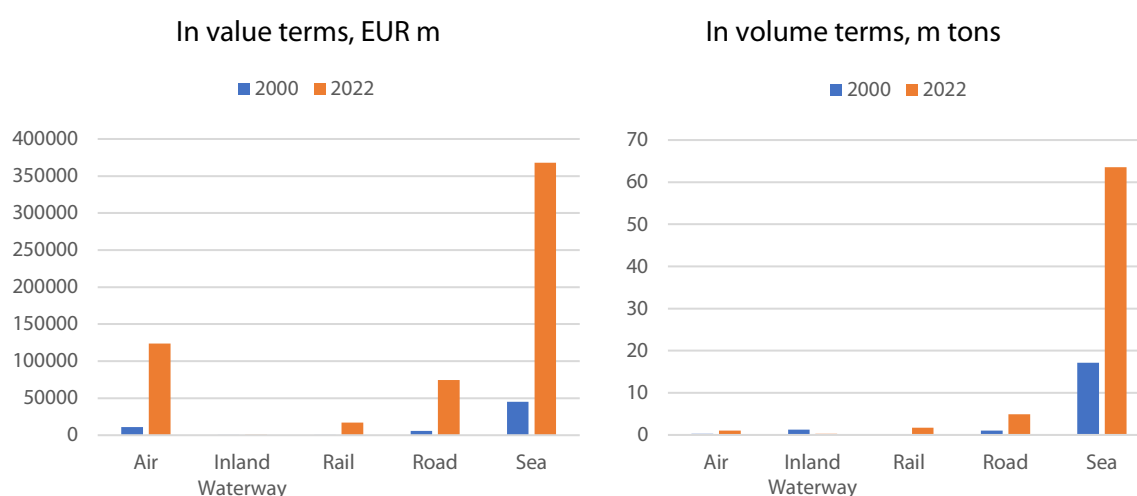
1. INTRODUCTION

1.1. Scope of the study

This study complements the study for Committee on Transport and Tourism (TRAN Committee) of the European Parliament, 'Chinese Investments in European Maritime Infrastructure'¹ and assesses Chinese investments in the intermodal transport infrastructure, which in many cases have been accompanied by investment into the maritime infrastructure.

Although maritime routes have traditionally been a major mode of transportation of China's exports to the EU, accounting for roughly 80-85% of all trade volumes between the EU and China², **non-maritime modes have been increasing in importance** (Figure 1). This is most evident in the value of trade. The shares of air and road transport increased during 2000-2022 by about 4 percentage points each, reflecting the higher prices of goods transported via these modes. In addition, in volume terms, there has been an extraordinary rise in the annual weight of freight transported by rail from China to the EU between 2000 and 2022, which has increased by more than 24 times to 1.7m tons.

Figure 1: China's goods export to the EU by mode of transport



Sources: Eurostat-Comext, authors' calculations.

China-EU trucking received a boost in 2016³, after China became the 70th country to ratify the UN Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention), the global standard for international freight customs transit. The volume of goods imported from China to the EU by road increased approximately eightfold during 2000-2022 to 4.9m tons.

Roads are a key transshipment mode for freight transportation inside Europe, accounting for about 75% of inland freight⁴, although there has been a gradual shift to rail in line with the European Green Deal.

¹ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

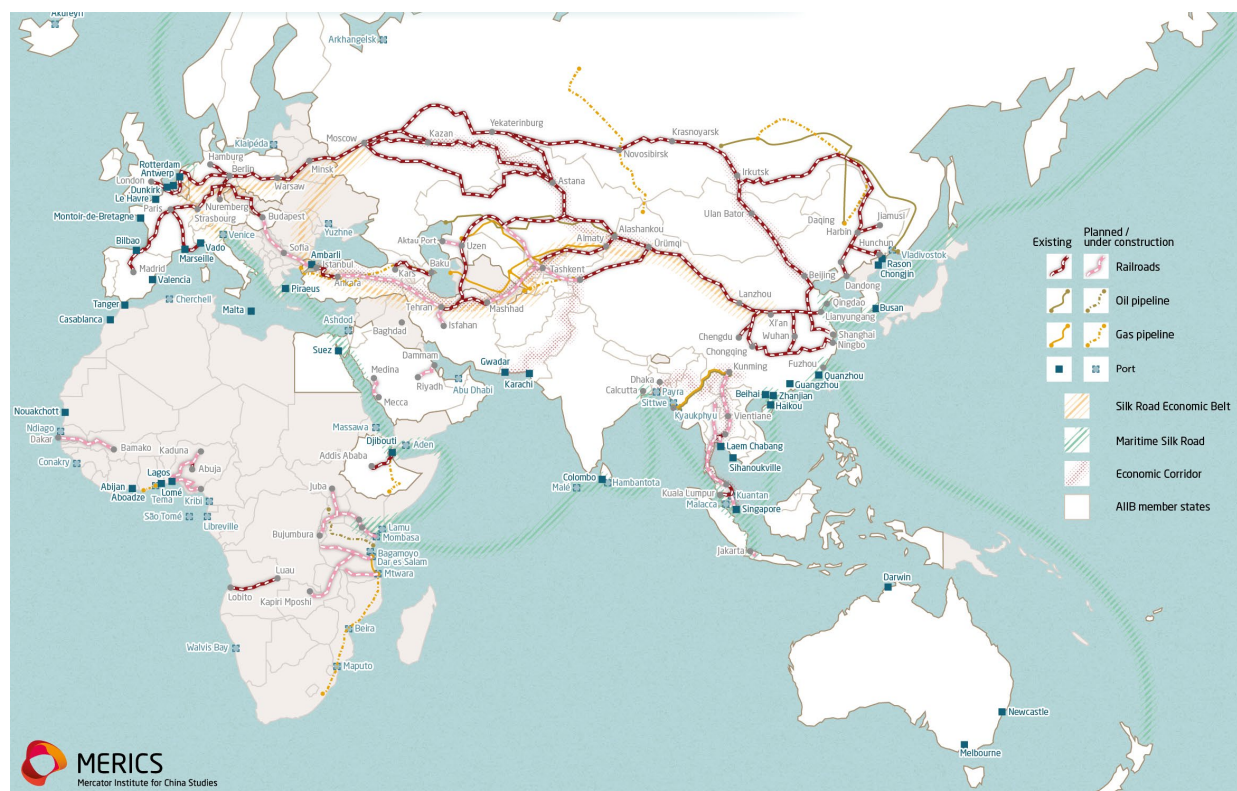
² <https://www.ebrd.com/news/publications/special-reports/sustainable-transport-connections-between-europe-and-central-asia.html>

³ <https://index1520.com/en/analytics/avtomobilnye-gruzoperevozki-iz-es-v-kitay-tekushchee-sostoyanie-i-perspektivy/>

⁴ https://transport.ec.europa.eu/news-events/news/study-analyses-transshipment-options-more-competitive-intermodal-transport-and-terminal-capacity-ten-2022-05-05_en

Transport-related investments have been vital in facilitating trade for China, as enhancing trade is one of the key objectives of the **Belt and Road Initiative (BRI)**, an ambitious project to connect China with its neighbouring states, the Asian continent in general, and Africa and Europe with enhanced infrastructure by land and sea (Figure 2). BRI consists of two primary components: the Silk Road Economic Belt, a land route connecting China to Southeast Asia, South Asia, Central Asia, and Europe, and the 21st-century Maritime Silk Road, a sea route linking China's coastal regions to Southeast Asia, South Asia, the South Pacific, the Middle East, Eastern Africa and Europe. Within the extensive array of BRI projects, rail connections and express motorways assume a prominent and indispensable role.

Figure 2: Map of the Belt and Road Initiative projects



Source: MERICS, <https://merics.org/en/tracker/mapping-belt-and-road-initiative-where-we-stand>.

Within the EU, Central and Eastern European Member States appear to be of particular investment interest for China, as illustrated by the **'16+1' initiative** set up by the Chinese Ministry of Foreign Affairs. Launched in 2012, it is largely seen as an extension of the BRI. In 2019 Greece joined the initiative, which hence became '17+1', but in 2021-2022 the Baltic states left it because of political tensions with China. Currently the format is '14+1' and includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Greece, Hungary, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovakia and Slovenia.

China has increasingly become a competitor to the EU in the **EU Neighbourhood** region, especially in the selected countries of the Western Balkans (Serbia, Montenegro), through financing their infrastructure projects as well deepening trade integration. It has tended to finance transport infrastructure projects in this region through loans rather than direct investment.

Meanwhile, the EU appeared to have lost its strategic focus in the neighbouring regions, at least until the full-scale Russian invasion of Ukraine. Until recently, it was not clear how the EU wants to engage

with the region⁵, nor was it evident that the EU has a goal in mind that it is working towards. The lack of good-quality transport infrastructure in the EU Neighbourhood, both in terms of connections between countries and with the EU, has been one of the main barriers to stronger integration and holds back regional trade.

Impact of the BRI is believed to include both opportunities and challenges for the Trans-European Network for Transport (TEN-T)⁶. **Opportunities** arise as new connectivity routes reduce the costs of transportation, especially with increased rail services, which may allow shippers and their logistics providers to switch a part of their freight to rail. Potential **challenges** may arise if new traffic induced by BRI investments results in bottlenecks and capacity constraints. Unlike the TEN-T programme, the BRI does not have a clearly defined rationale, budget, programme, project list and evaluation framework, or named co-ordinators for each core network corridor.⁷

Chinese companies that invest in the European transport infrastructure are often **state-owned** and are typically closely aligned to Chinese government policy⁸, so their actions are not driven only by purely commercial motives. Empirical evidence shows that Chinese investors have different characteristics and that different motives can underlie their investment decisions.⁹ They appear to be less concerned about market size and risks in the target countries, and are significantly influenced by government policies such as the BRI and Made in China (as many of them are SOEs). They also tend to focus on targets with higher debt levels and lower profitability, which might be explained by additional non-economic motives that are factored into the decision-making process.

Beyond the objective of improved connectivity, Beijing is found to be pursuing **strategic and political interests** via its infrastructure investments and gaining soft influence in the EU Neighbourhood region¹⁰, especially the Western Balkans. Deliberate military and strategic functionality seems clearly entrenched in the BRI initiative, as ownership of, inter alia, port infrastructure allows China to develop a network of strategic strongpoints with dual-use features that bolster a range of potential military and intelligence capabilities¹¹.

Projects within the BRI framework are not always consistent with the priorities of the countries themselves and can have negative spill-overs in terms of weaker environmental and public procurement standards, as well as debt dependency¹². The **lack of conditionality for Chinese investments** makes them more attractive. This negatively impacts EU conditionality by reducing the effectiveness of proposed reforms and standards, particularly in terms of social rights, sustainability and environmental protection. In addition, the selective format of co-operation is argued by some to give China an opportunity to use a 'divide and conquer' strategy¹³.

This study is to be seen as a continuation of the previous one on Chinese investments in European maritime infrastructure¹⁴, as we conduct **risk assessment** using the same methodology for other types of European transport infrastructure. The study aims to provide policy recommendations to guide EU

⁵ <https://wiiw.ac.at/keeping-friends-closer-why-the-eu-should-address-new-geo-economic-realities-and-get-its-neighbours-back-in-the-fold-p-6487.html>

⁶ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2018\)585907](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2018)585907)

⁷ <https://jshippingandtrade.springeropen.com/articles/10.1186/s41072-019-0048-3>

⁸ <https://www.cairn.info/revue-internationale-et-strategique-2017-3-page-73.htm>

⁹ <https://onlinelibrary.wiley.com/doi/full/10.1111/roie.12566>

¹⁰ [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733558/EPRS_BRI\(2022\)733558_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733558/EPRS_BRI(2022)733558_EN.pdf)

¹¹ [https://asiasociety.org/sites/default/files/2020-09/Weaponizing the Belt and Road Initiative_0.pdf](https://asiasociety.org/sites/default/files/2020-09/Weaponizing%20the%20Belt%20and%20Road%20Initiative_0.pdf)

¹² <https://wiiw.ac.at/keeping-friends-closer-why-the-eu-should-address-new-geo-economic-realities-and-get-its-neighbours-back-in-the-fold-p-6487.html>

¹³ <https://www.tandfonline.com/doi/abs/10.1080/09668136.2019.1648764>

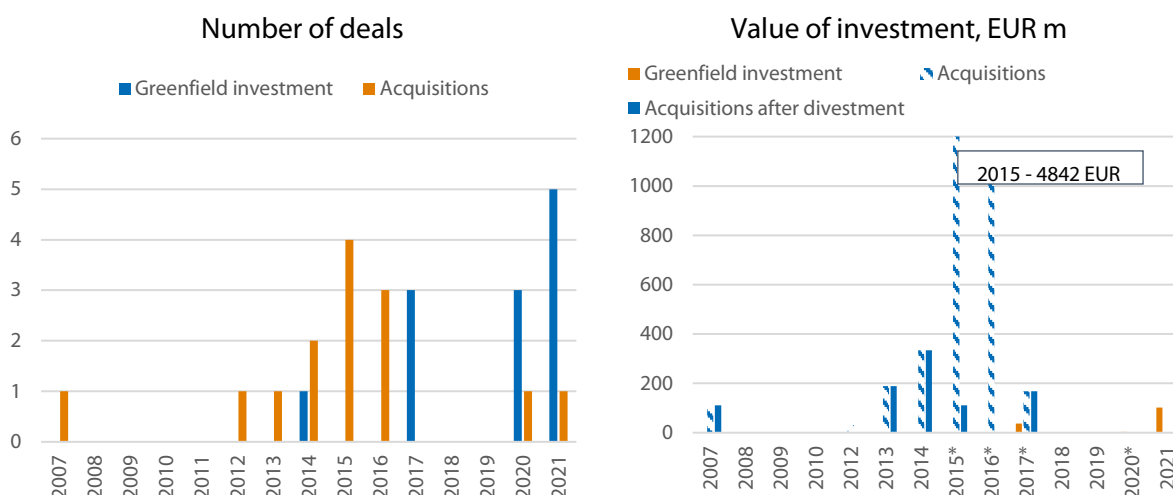
¹⁴ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

decision-making, with particular attention to the competences of the European Parliament. To this end, the study is divided into three sections. **Section 1** is an introductory chapter, providing a background regarding the Chinese investments in the non-maritime sector in Europe. **Section 2** provides a case study-based risk assessment of Chinese investments in the non-maritime transport infrastructure of the EU and EU Neighbourhood to provide the necessary depth to our analysis. The study assesses the risks using a framework designed by the *National Risk Assessment of the Kingdom of the Netherlands 2022* and adapting it to the requirements of this study by focusing on five key risk areas. The framework is applied to five case studies: Germany, Greece, Hungary, Serbia and Turkey. Finally, **Section 3** summarises the study's main conclusions and presents evidence-based and actionable policy recommendations to mitigate and manage the identified security risks.

1.2. Chinese direct investment in the EU and EU Neighbourhood's non-maritime transport infrastructure

This section analyses the data on Chinese direct investments in the EU's non-maritime transport infrastructure, which includes rail, air and road transport. Owing to the limited data coverage of China's investment activity abroad, data from multiple sources are consolidated to present the most comprehensive picture possible of the Chinese investment presence. We convert USD-denominated values into EUR-denominated ones, using average annual and monthly USD/EUR exchange rates reported by the European Central Bank.

Figure 3: China's acquisitions and announced greenfield investment projects in the non-maritime sector infrastructure of the EU and its Neighbourhood



Sources: fDi Markets; China Global Investment Tracker; ECFR China-EU Power Audit Key Deals 2005-2017, <https://www.avionews.com/en/item/1146654-aircraft-and-finance-hna-group-acquires-a-48-stake-in-aigle-azur.html>, https://hahn.fluglaerm.de/oefent/zeitungsartikel_2017/rz080817_wahrer_kaufpreis_hna.pdf, <https://rhc.railcargo.com/en/news/rail-cargo-terminal-bilk-ocean-rail-logistics-agreement>, <https://www.reuters.com/business/aerospace-defense/air-france-klm-seeks-about-1-bln-euros-via-share-issue-2021-04-12/>, <https://cms.law/en/deu/news-information/international-cms-team-advises-chinese-container-logistics-giant-cosco-on-acquisition-of-greek-pearl-group>; authors' calculations.

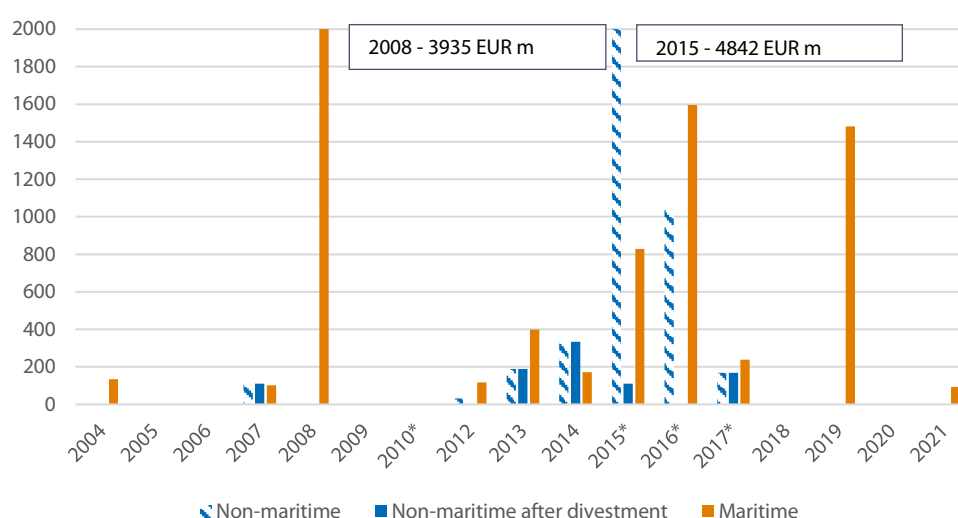
* In 2015, 2016 and 2020 there were deals with unknown value: in 2015 CEFC acquired a 10% stake in the Travel Service airline in Czechia; in 2016 Ocean Rail Logistics S.A. acquired a 15% stake in Budapest Intermodal Logistics Centre (BILK) in Hungary; in 2020 COSCO, via its subsidiary Ocean Rail Logistics S.A., acquired a 60% stake of Piraeus Europe Asia Rail Logistics Ltd. In 2017 a greenfield investment project was initiated in Greece, when COSCO created its subsidiary Ocean Rail Logistics.

Figure 3 shows the investment activity of Chinese companies in the non-maritime transport sector of the EU and its Neighbourhood¹⁵ based on the data collected. During 2007-2021, a total of 14 acquisition deals, and 12 announced greenfield investment projects can be identified in the sector. Acquisitions accounted for the bulk of the capital invested – during 2007-2021 their total value exceeded EUR 6.7bn,¹⁶ while the value of the capital pledged in the announced greenfield projects stood at about EUR 0.1bn. However, when one accounts for divestment of the acquisitions, the value of this type of investment drops to only about EUR 0.9bn. More detailed information on the investment projects can be found in Table 3 and Table 4 in the Annex.

Investment in non-maritime transport infrastructure is only a fraction of that in maritime transport infrastructure, especially after deducting the acquisitions that were divested¹⁷ – at just EUR 0.9bn, compared with EUR 9bn (see Figure 4).

Figure 4: China's acquisitions in the maritime and non-maritime sector infrastructure of the EU and its Neighbourhood

Value of investment, EUR m



Sources: fDi Markets; China Global Investment Tracker; ECFR China-EU Power Audit Key Deals 2005-2017, <https://www.avionews.com/en/item/1146654-aircraft-and-finance-hna-group-acquires-a-48-stake-in-aigle-azur.html>, https://hahn.fluglaerm.de/oefent/zeitungsartikel_2017/rz080817_wahrer_kaufpreis_hna.pdf, <https://rhc.railcargo.com/en/news/rail-cargo-terminal-bilk-ocean-rail-logistics-agreement>, <https://www.reuters.com/business/aerospace-defense/air-france-klm-seeks-about-1-bln-euros-via-share-issue-2021-04-12/>, <https://cms.law/en/deu/news-information/international-cms-team-advises-chinese-container-logistics-giant-cosco-on-acquisition-of-greek-pearl-group>, <https://www.truenumbers.it/cina-porti-europa/>; authors' calculations.

*In 2010 and 2016 there were deals in maritime infrastructure with unknown value: in 2010, Shanghai International Port Group acquired 25% of Zeebrugge port, and in 2016 ICBC acquired some share in Antwerp port. In 2015, 2016 and 2020 there were deals with unknown value: in 2015, CEFC acquired a 10% stake in the Travel Service airline in Czechia; in 2016 Ocean Rail Logistics S.A. acquired a 15% stake in Budapest Intermodal Logistics Centre (BILK) in Hungary; in 2020 COSCO, via its subsidiary Ocean Rail Logistics S.A., acquired a 60% stake of Piraeus Europe Asia Rail Logistics Ltd. In 2017 a greenfield investment project was initiated in Greece, when COSCO created its subsidiary Ocean Rail Logistics.

¹⁵ The EU Neighbourhood is defined here as the Western Balkan countries, Georgia, Moldova, Turkey and Ukraine.

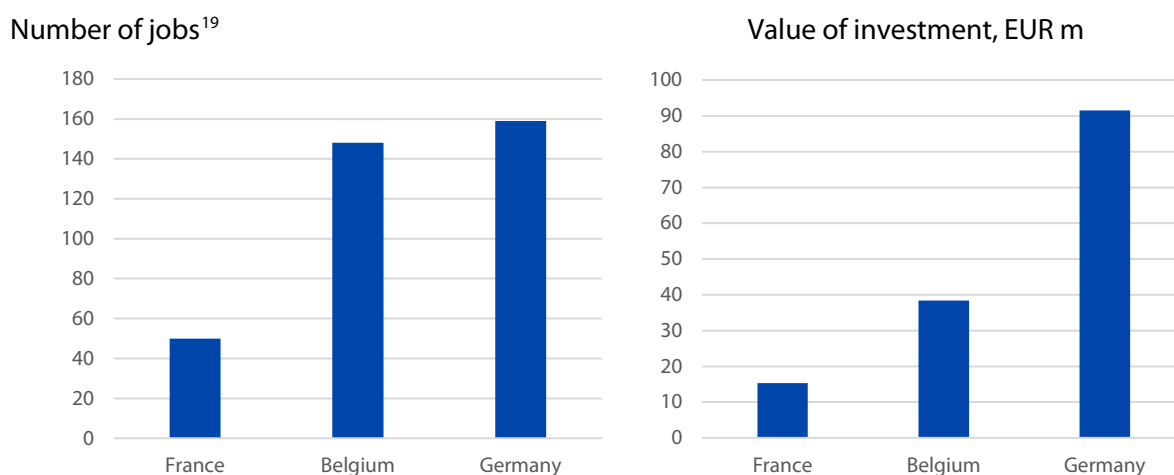
¹⁶ There is no available information on the value of three acquisition deals.

¹⁷ Divestment is the process of selling subsidiary assets, investments, or divisions of a parent company.

According to fDi Markets data,¹⁸ China's greenfield investment projects in the sector generated around 360 jobs during the entire period, most of them in Germany (159), which also attracted the highest share of the pledged capital (see Figure 5).

Figure 5. Belgium comes second in terms of jobs created and capital pledged, but the value of the greenfield projects is much smaller than for Germany.

Figure 5: Number of jobs created, and capital pledged in the announced greenfield investment projects in the maritime sector infrastructure of the EU and its Neighbourhood by China, 2004-2021*



Sources: fDi Markets; authors' calculations.

* In 2017 a greenfield investment project was initiated in Greece, when COSCO created its subsidiary Ocean Rail Logistics, but further details are not known.

However, these results do not take into account the fact that most of the Chinese infrastructure construction projects in the non-EU member countries are financed by loans. The total value of such deals tends to be multiple times higher than the value of FDI projects and amounts to a significant proportion of GDP in some countries²⁰: 18% of GDP in Montenegro, 12% in Serbia, 10% in Bosnia and Herzegovina, and 7% in North Macedonia. In 2022 the combined value of railway projects related to the BRI, exclusively through construction contracts, reached about EUR 5.2bn²¹.

¹⁸ fDi Markets, a Financial Times dataset on cross-border greenfield investments that covers all countries and sectors worldwide. It contains information on various characteristics of the announced greenfield investment projects, such as sector of the mother company and an affiliate that is being created, value of investment projects and estimate of the jobs being created.

¹⁹ Number of jobs is estimated in the fDi Markets dataset based on the announcements by the companies and available information on the size of similar companies/projects.

²⁰ https://www.researchgate.net/publication/351034366_Chinese_Investment_in_Central_and_Eastern_Europe_A_reality_check_Tamas_Matura_A_Research_Report_by_the_Central_and_Eastern_European_Center_for_Asian_Studies_April_2021_Budapest#fullTextFileContent

²¹ <https://greenfdc.org/china-belt-and-road-initiative-bri-investment-report-2023-h1/>

2. CASE STUDIES AND RISK ASSESSMENTS

A general and case study-based risk assessment is conducted here in order to provide an in-depth evaluation of the Chinese investment presence in European critical transportation infrastructure. The risk assessment framework applied adapts the methodology from the National Risk Assessment of the Kingdom of the Netherlands 2022²² compiled by the National Network of Safety and Security Analysts²³, which follows the main methodology usually adopted in risk analysis by other countries and in the private sector. The purpose is to evaluate various risks across two primary dimensions – *likelihood* and *impact* – in different potential scenarios.

Risks are categorised into five main groupings, which are most relevant to critical transportation infrastructure:

1. **EU-level dependency risk** (additional dependency risks to total single-market dependency levels) – *How dependent is the single market on the Chinese investment in the port infrastructure?*
2. **Individual dependency risk** (dependency risks for an individual investment) – *How dependent is the host country on the Chinese investment in the given port infrastructure, including at the 'ecosystem' level?*
3. **Coercion and/or influence risk** – *Does this investment meaningfully raise the risk of Beijing's coercion/influence over the country's and EU politics, actively or passively?*
4. **Cybersecurity/data risk** – *Does Chinese investment/participation in this infrastructure/project create new cyber threats to critical infrastructure and/or raise data security/privacy risks?*
5. **Hard security risk** – *Does the investment create traditional national security risks, mainly related to use by China's military or to its ability to inhibit or undermine European security?*

These five risk groups are used to examine the risk to critical transportation infrastructure across the EU and countries in the EU Neighbourhood. To enhance the comprehensive assessment of risks, three case studies delve into specific risk scenarios that might emerge as a result of Chinese investments in, or utilisation of, critical maritime infrastructures across Europe. Each scenario is subjected to a thorough analysis, evaluating its likelihood of occurrence and potential impact. The findings of this assessment are organised into a table, plotting the scenarios based on their likelihood and impact levels. This visual representation aids stakeholders in promptly gauging which risks necessitate immediate attention and action and, in contrast, which require lighter monitoring and contingency planning.

The following case studies are examined:

- Germany;
- Greece;
- Hungary;
- Serbia;
- Turkey.

²² <https://www.government.nl/documents/reports/2022/09/26/national-risk-assessment-of-the-kingdom-of-the-netherlands-2022>

²³ <https://www.rivm.nl/en/about-rivm/organisation/centre-for-environmental-safety-and-security/national-network-of-safety-and-security-analysts>

2.1. Germany

SUMMARY OF KEY MESSAGES

- **The Port of Hamburg is an essential node in Northern Europe and the Baltics** and is directly part of three core network corridors of the Trans-European Transport Network (TEN-T) and Europe's largest rail port.
- COSCO's acquisition of 24.99% of the Container Terminal Tollerort in the Port of Hamburg is seen by COSCO as a **strategic investment in a port that it aims to develop as a regional hub**.
- If COSCO's investment in Hamburg generates new demand over time as it becomes the shipper's regional hub, it is **likely to boost demand for intermodal connections, including for TEN-T corridors**.
- However, if the investment and increased trade flows result merely **in redirection of existing total flows** through to Hamburg, the benefits will be localised, probably at the cost of other ports, and **there will be limited or no net benefits at the EU level**.
- **Dependency risks will be scaled to the amount of additional throughput** generated by COSCO and to what degree it is able to win market share and **could translate to intermodal hinterland connections**, including the TEN-T corridors.
- **Influence risks are the most likely to materialise**, as they already have in many ways, with an additional area of concern being **threats of coercion over the flow of trade between different European hubs, which could harm TEN-T projects along those logistics networks**.
- **Cybersecurity/data risks are marginally increased**, but are likely to grow as a result of the integration of more networked and interconnected systems in shipping and port operations, such as smart shipping, digital transition, 5G, sensors, etc.
- **Hard security risks are very limited, owing to Hamburg's geographic location**, which is surrounded by NATO and far from any theatre that the PLAN would be active in for the foreseeable future.

Background

The Port of Hamburg is an essential node in Northern Europe and the Baltics and is directly part of three core network corridors of the Trans-European Transport Network (TEN-T): The North Sea-Baltic, North Sea-Mediterranean, and Orient-East Mediterranean corridors (Table 1). It is Europe's largest rail port, and rail is the top carrier for hinterland services, with 54% of total transport volume transported by rail in 2022²⁴. The autobahn network is one further component in the Port of Hamburg's hinterland services, with trucks accounting for about 38% of hinterland traffic volume in 2022²⁵.

After two years of negotiations, which were clouded in controversy²⁶, Chinese state-owned firm COSCO Shipping Ports Limited (CSPL) signed contracts²⁷ with Hamburger Hafen und Logistik AG (HHLA) in June 2023 to acquire a 24.99% share in the port's Container Terminal Tollerort (CTT). The size of the shareholding limits CSPL's legal power and excludes it from a place on the supervisory board, thus

²⁴ <https://www.hafen-hamburg.de/en/port-of-hamburg-magazine/hinterland/vital-arteries-for-the-port-of-hamburg/>

²⁵ <https://www.hafen-hamburg.de/en/port-of-hamburg-magazine/hinterland/vital-arteries-for-the-port-of-hamburg/>

²⁶ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

²⁷ <https://www.spiegel.de/wirtschaft/unternehmen/cosco-deal-im-hamburger-hafen-nach-zwei-jahren-unterzeichnet-a-ad158e29-113a-481e-b015-40c152388157>

making COSCO a largely 'silent partner' that cannot directly influence CTT and HHLA operations or strategy making. The 24.99% ownership also does not give COSCO exclusivity rights²⁸ over CTT; other shipping companies will be able to use CTT as paying customers.

Table 1: Hamburg-North Sea-Baltic transmodal routes

| | Connects via | Mode of transport | TEN-T |
|---|---|-------------------|--|
| Hamburg: Shipping along Elbe inland ports | Dresden, Riesa, Torgau, Decin, Lovosice, Roßlau | Waterway-inland | Part of Orient-East Mediterranean corridor |
| Gdynia/Gdansk: A1, S7 | A1 Czechia S7 Poznan, Lodz, Warsaw | Express motorway | Part of Baltic-Adriatic corridor |
| Klaipeda: national road A1 | Kaunas, Vilnius | Express motorway | Part of North Sea-Baltic corridor |
| Antwerp | Brussels, Leuven, Liège | Railway | Part of North Sea-Baltic corridor |
| Hamburg railway: Hamburg-Hannover Bahn, then Nord-Süd-Strecke, West-Ost-Strecke | Hannover, Frankfurt, Southern Germany; Poland, Czech Republic | Railway | Hamburg-Hannover Bahn: part of Scandinavian-Mediterranean corridor |
| Gdansk/Gdynia: Baltic-Adriatic rail corridor | Poland, Czech Republic, Slovakia, Austria | Railway | Part of Baltic-Adriatic corridor |
| Swinoujscie: S3 and A6 | S3 Szczecin, Gorzow Wielkopolski A6 Szczecin, Stargard, Goleniow | Express motorway | S3: part of Baltic-Adriatic corridor |
| Rotterdam/Antwerp: waterway along the Rhine | Duisburg, Mannheim/Ludwigshafen, Strasbourg, Basel | Waterway-inland | Part of Rhine Alpine corridor |

Source: European Commission, The North Sea – Baltic Corridor. https://transport.ec.europa.eu/transport-modes/rail/ertms/who-involved-ertms-deployment/corridors/north-sea-baltic-corridor_en.

Benefits drawn from the investment

CTT was 100%-owned by HHLA before the sale, so HHLA and its shareholders will be the beneficiaries of the deal. When first announced, the sale of 35% of CTT was set for EUR 99m²⁹. The transaction amount has yet to be disclosed at the time of writing, so it is unclear if the price tag has dropped commensurately with the reduction in the size of the shareholding. If so, the total cost would be EUR 70.686m.

COSCO announced that it would use CTT as a 'preferred hub' and facilitate two Far East services, one Mediterranean service and one Baltic feeder service through the terminal. HHLA argues that this new activity will secure sustainable development and job opportunities, as it stated in a press release³⁰.

²⁸ <https://hhl.de/faktencheck-cosco-beteiligung>

²⁹ <https://www.caixinglobal.com/2021-09-23/cosco-unit-to-pay-116-million-for-hamburg-terminal-stake-101776391.html>

³⁰ <https://hhl.de/en/media/news/detail-view/way-is-clear-finalise-cspl-investment-ctt>

COSCO largely agrees, as it made clear in its own press release³¹. Both sides noted that around 30% of the trade that passes through the port goes to or comes from China.

These assessments are generally accurate. The benefits of the investment are tangible for Hamburg, and for Germany and some of its neighbours, especially if it leads to further expansions of COSCO's operations in Hamburg as a critical hub for hinterland shipping and as a transshipment hub for the Baltic countries and Germany with the rest of the world. That could generate further demand for companies upstream from COSCO in the region – the Port of Hamburg itself, the inland terminals along the Elbe basin, the freight rail providers and truckers that engage in intermodal transit by bringing goods to Hamburg to be shipped by sea, and all of the suppliers of those firms as well.

If COSCO's investment in Hamburg generates new demand over time as it becomes the shipper's regional hub, it is likely to boost demand for intermodal connections, including for TENT-T corridors. Intermodal links that could be impacted include maritime and inland feeder ports, freight rail, and highways for trucking. Any sizeable increase in total throughput will have a knock-on effect of higher demand for the associated freight rail lines. The possible positive impacts extend to a range of TEN-T corridors and projects, assuming that port throughput does meaningfully increase as a result of COSCO's investment.

Those benefits – for the HHLA itself and its shareholders; for the City of Hamburg, its hinterland, and its transshipment hub connections; and for the workers, companies, and jurisdictions upstream of the value chain – are all potentially real if a significant rise in COSCO's activities in and through Hamburg materialises. But, like all opportunities, they must be weighed against their risks.

Downside of the investment

As the final transaction has (at the time of writing) not yet been completed, let alone any follow-up and change in COSCO's activities in the port, there are no examples of downsides explicitly related to the investment so far. Some downsides unrelated to security and resilience risks could emerge, as has been the case in other COSCO invested ports, such as issues around labour rights and protections as well as environmental impacts (such as those outlined in relation to Piraeus). However, those issues are already well covered under German and EU jurisdictions, as well as the jurisdictions of EU Member States connected to the Port of Hamburg through TEN-T corridors/projects, which also mitigate some of those risks if enforcement remains satisfactory. More broadly speaking, risks are undoubtedly present as a consequence of the investment and are explored in the risk assessment below.

In the event of goods trade flows being diverted towards Hamburg, demand for shipping services could be drawn from seaports along the Northern European coastline. This could draw demand from nearby ports such as Bremerhaven and Swinoujscie, could divert trade flows from major ports such as Antwerp and Rotterdam, and could boost feeder service demand from Gdansk/Gdynia, Klaipeda, Riga, Tallinn, Helsinki and Stockholm, with Hamburg as the hub. All of these routes correspond with TEN-T corridors, and could generate positive or negative effects on intermodal connections.

³¹ https://en.coscoshipping.com/art/2023/5/12/art_6923_322523.html

Risk assessment: Hamburg, Germany

| Impact level / Likelihood | Very unlikely | Unlikely | Somewhat likely | Likely | Very likely |
|---------------------------|---------------|---|--|--------|--|
| Catastrophic | | | | | |
| Very serious | | Cybersecurity/data risk: COSCO operations become a platform for cyber-attacks and espionage, China gains extensive access to vital systems and data, including German and NATO military secrets | | | |
| Serious | | Individual dependency risk: COSCO threatens to shift trade flows materialise Coercion/influence risk: Coercion leads Germany to block a European Council decision | EU-level dependency risk: COSCO significantly expands its footprint in the Baltic, cementing access and hubs across the entire common market | | |
| Substantial | | Individual dependency risk: Hamburg becomes a critical hub, then Taiwan conflict breaks down trade flows | | | Coercion/influence risk: Discreet or implicit coercion risks influence German policy making |
| Limited | | Hard security risk: PLAN indirectly supplied by COSCO through Hamburg in covert manner | | | Cybersecurity/data risk: COSCO as a platform for cyber-attacks and espionage obtains irregular but useful information on target subjects |

Source: Authors' analysis.

Individual dependency risk

The individual dependency risk would depend on the amount of port throughput dependent on COSCO³² that could be redirected to another port. That could lead to localised job losses and other ecosystem impacts in Hamburg, while generating more demand in other ports, which could lead to a political backlash from Hamburg's port workers and those who rely on them. It could also have an upstream impact in intermodal connections, including local ones in Germany in the rail, road and inland waterway logistics networks.

A similar, more considerable impact could result if open conflict breaks out in the Taiwan Strait. If European sanctions, Chinese suspension of trade, or a general breakdown of trade occurs (something deemed unlikely for now, although still a possibility), leading COSCO to suspend operations in Hamburg (and elsewhere), the knock-on impacts for Hamburg could be significant. A major reduction or complete breakdown of trade between China and Europe would be catastrophic for all ports, their intermodal connections, TEN-T corridors, and the economy overall.

EU-level dependency risk

For the investment itself, adding a minority share in CTT adds only a minor amount to EUR 10.2bn of Chinese investment in EU maritime infrastructure. Instead, EU-level dependency risk, if it emerges, will come about if COSCO goes forward with making CTT its preferred hub for Northern Europe and the Baltics in a way that significantly increases throughput – effectively, the same development that generates opportunities through higher regional logistics demand also creates dependency risks. If this leads to significant new COSCO operations in the region, that would mean that COSCO (together with the closely linked CMG) has extended itself across the entire range of European shipping markets: Hamburg as the new hub in the north and the Baltic, as well as the Elbe hinterland; Rotterdam and Antwerp to build market share in the English Channel region, as well as the Rhine hinterland; Valencia

³² <https://warontherocks.com/2022/11/coscos-hamburg-terminal-acquisition-and-the-lessons-europeans-should-take-away/>

and Vado Ligure for the western Mediterranean; and Piraeus for the eastern Mediterranean, the Black Sea and as a European gateway more broadly.

However, this would be likely to come at the expense of European shippers³³ that, as private companies, struggle to compete on prices because of their fiduciary responsibilities, which COSCO, as a Chinese SOE, is not subject to³⁴. That enhances dependency risks at the German, regional and EU levels as COSCO and other Chinese firms secure a comprehensive footprint that facilitates market share acquisition and connected dependency risks.

Furthermore, the dependency risks could also translate to intermodal hinterland connections, including the TEN-T corridors mentioned earlier. Expanded use of Hamburg by COSCO is likely also to expand feeder services in the Baltic Sea, either through local feeder companies or through COSCO subsidiaries such as COSCO (Europe) and/or the Diamond Line. Those include the inland ports along the Elbe and Vistula rivers as part of the Orient-East Mediterranean corridor and the Baltic-Adriatic corridor. The story is similar for other intermodal regional TEN-T corridors in terms of expressways, for trucks along the North Sea-Baltic corridor and the Baltic-Adriatic corridor, and railways, along the Scandinavian-Mediterranean corridor and the Baltic-Adriatic corridor, to name just a few.

Coercion/influence risk

Unlike some other EU Member States, Germany and German companies have not faced instances of direct and explicit economic coercion from Beijing.³⁵ Nevertheless, some politicians, officials and business leaders in Germany have publicly commented in support of China-related decisions or have voiced criticisms of these only implicitly owing to fear of economic retaliation, which has become more widespread³⁶ under Xi Jinping. The debate around approvals for COSCO's Hamburg investment featured such commentary, including from HHLA spokespeople who argued that jobs were at risk, as was the port's competitiveness with Rotterdam and Antwerp³⁷. Similarly, implicit threats were voiced not by China itself but by local leaders³⁸ in support of approving the investment. These were focused on theoretical impacts – it is not difficult to imagine how such actors could be influenced *after* the investment and subsequent port usage increase occurs.

It is unlikely that COSCO's implicit influence on its own would be enough to change any major policy or decision in a significant way. Instead, the serious nature of the problem arises not from any individual issue, but from small but meaningful influence over many decisions. The overall level of interdependencies in the broad Germany-China relationship (or the EU-China relationship³⁹) already influences policy making and is an omnipresent feature of the debate in Germany (or the EU more broadly).

One additional area of concern is the influence that could be leveraged by threats of coercion over the flow of trade between different European hubs. COSCO and CMG could theoretically threaten Germany, the Netherlands or Belgium that they would redirect customers' logistics chains away from Hamburg, Rotterdam or Antwerp and towards one of the other hubs it has a presence in. It would obviously be expensive for COSCO to do so, but the company lacks a fiduciary responsibility and can

³³ <https://warontherocks.com/2022/11/coscoss-hamburg-terminal-acquisition-and-the-lessons-europeans-should-take-away/>

³⁴ <https://www.imf.org/-/media/Files/Publications/CR/2021/English/1CHNEA2021002.ashx>

³⁵ One minor exception has been Leica Camera, in response to an advertisement featuring the Tiananmen Square massacre. There is also the indirect example of German automotive component firms impacted by Chinese coercion directed at Lithuania for their supply chains there.

³⁶ [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738219/EPRS_BRI\(2022\)738219_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738219/EPRS_BRI(2022)738219_EN.pdf)

³⁷ <https://www.hellenicshippingnews.com/rejecting-chinese-bid-would-put-hamburg-port-at-disadvantage-mayor/>

³⁸ <https://www.ft.com/content/be082c77-1f9c-409f-86e8-eeb2bd9d1418>

³⁹ <https://merics.org/en/report/mapping-and-recalibrating-europes-economic-interdependence-china>

be compelled to action by Beijing. If such threats materialise, this would detrimentally influence TEN-T projects along those logistics networks.

For example, COSCO could act on its threats to redirect its logistics flows away from the Rhine hinterland and instead go through other networks to run through Hamburg. That could be beneficial for the intermodal logistics suppliers and TEN-T corridors along the new connections the flow has been directed towards, but would negatively impact the companies and infrastructure connecting to Rotterdam and Antwerp.

Cybersecurity/data risk

Cybersecurity and data risks from COSCO in Hamburg potentially exist even in the absence of the CTT investment. COSCO already has two offices⁴⁰ in the city centre through which it could access networks, gather data, covertly transfer data, etc. COSCO vessels also already pass through the port terminals and could be platforms for cyber and data risks. HHLA has stated that, given its 24.99% stake, COSCO would not have access to internal IT systems. However, if COSCO intends to use CTT as a primary berth, it seems unlikely that COSCO would not insist on its own preferred hardware and software solutions for its port operations, for example through suppliers such as ZPMC (which is already used in the port), which provides cranes and other hardware, as well as digital solutions to improve their functionality. These might not interface with the CTT and HHLA IT systems, but they could present other risks.

Nevertheless, COSCO, like all Chinese firms, is subject to the National Security Law, which can enlist Chinese persons in intelligence gathering⁴¹, even overseas. As a 'backbone enterprise' for national security purposes, COSCO certainly possesses the potential motivation to support intelligence gathering⁴². That does not mean it already does so, but growing tensions between China and Europe will raise Beijing's desire for better intelligence, including closer monitoring of NATO vessels that regularly visit the Port of Hamburg⁴³.

Cyber and data risks are also likely to rise, not necessarily because of any assumptions about COSCO itself, but as a consequence of the integration of more networked and interconnected systems in shipping and port operations in general. These risks will increase significantly as more smart shipping, digital transition, 5G, sensors and other technologies are integrated. In that sense, cyber and data risks are likely to spread across intermodal connections as well, including into TEN-T systems potentially. Digital solutions are highly sought after in the logistics industry, especially in terms of being able to track and monitor a product seamlessly as it moves from place to place and from transportation type to transportation type. To the extent that COSCO and its partners integrate their digital ecosystems to create a more complete picture, there is potential for greater reach by COSCO into inland logistics chains, as well as feeder and other maritime operations connecting through Hamburg.

Hard security risk

COSCO plays a critical parallel role with the PLAN, and despite the low likelihood of a geopolitical crisis, COSCO and its potential roles should nevertheless be monitored. That said, unlike in other ports, COSCO's formal logistics role in the PLAN and its operations in Hamburg have limited hard security risks.

⁴⁰ <https://www.coscoshipping.eu/global/show.php?id=86>

⁴¹ https://www.chinalawtranslate.com/en/2015nsi/#_Toc423592316

⁴² [https://ad-aspi.s3.ap-southeast-2.amazonaws.com/2021-02/Leaping across the ocean.pdf?VersionId=mrEJH8QwypEHHxT0jxtml8ucEeiZJfz](https://ad-aspi.s3.ap-southeast-2.amazonaws.com/2021-02/Leaping%20across%20the%20ocean.pdf?VersionId=mrEJH8QwypEHHxT0jxtml8ucEeiZJfz)

⁴³ <https://www.ndr.de/nachrichten/hamburg/NATO-Einsatzverband-Vier-Schiffe-im-Hamburger-Hafen,nato424.html>

It is difficult to imagine scenarios in which COSCO would be able to use a Northern European port where it controls only 24.99% of one terminal to transfer PLAN supplies clandestinely. Beyond exercises with Russia and developments in the Arctic region (as has occurred in the past⁴⁴), there are no evident reasons why PLAN vessels would be anywhere near Northern Europe and need resupplying. That said, this risk could, in principle, be mitigated with closer monitoring and through robust customs compliance regimes.

⁴⁴ <https://www.nytimes.com/2017/07/25/world/europe/china-russia-baltic-navy-exercises.html>

2.2. Greece

SUMMARY OF KEY MESSAGES

- The **Port of Piraeus is a fundamental hub for the TEN-T Orient-East Med (OEM) Core Network corridor.**
- The intermodal connections in the Port of Piraeus are **dominated by Chinese state-owned enterprise COSCO and its subsidiary Ocean Rail Logistics.**
- **Ocean Rail Logistics (ORL) owns 60% of the former Greek company Piraeus-Europe-Asia Rail Logistics (PEARL) that provides intermodal services.**
- The services provided by ORL highlight a case in which Chinese companies may not invest in the EU's TEN-T core network, but **can still influence significant trade flows in the region through the provision of services.**
- Some shipments from COSCO are transported across intermodal lines by ORL via rail connections using a still developing corridor through the Western Balkans and into central Europe, an **alternative to the OEM corridor.**
- The widespread presence of COSCO and its subsidiaries throughout the intermodal transportation system that connects Greece's main hubs with Central and Eastern Europe exacerbates the **risk of overdependencies and influence, as well as the hard security risk.**

Background

Greece is located at the southern end of the TEN-T Orient-East Med (OEM) Core Network corridor that connects nine EU Member States: Austria, Bulgaria, Cyprus, Czechia, Germany, Greece, Romania and Slovakia. The OEM represents a core line of connection between Northern and Southern Europe, and hence several parts of it overlap with other corridors, such as the Rhine-Danube corridor.

Another core scope of the OEM core network is to improve the connection between the Member States involved and neighbouring countries, such as Serbia, Macedonia and Turkey.

The nodes of the corridor located in Greece include the ports of Piraeus, Patras, Igoumenitsa and Thessaloniki. The ports are connected via land and water transportation to destinations in the EU and in neighbouring countries as shown in Table 2. However, according to a report⁴⁵ from July 2022, the intermodal gauge of the entire OEM corridor freight network is yet to be developed.

The Port of Piraeus occupies an important role in the TEN-T network and in the OEM corridor, as it is one of the main ports located in Southern Europe that serves Central and Eastern European countries as well as neighbouring countries. In November 2008 the Greek government and China's COSCO Pacific (subsequently COSCO Shipping) signed a concession agreement worth EUR 831.2m⁴⁶ for two of the three piers of the port; the concession will last until February 2052. In 2016 COSCO obtained a 51% majority stake in the Piraeus Port Authority (PPA/OLP), an unusual case of acquisition of a stake in a European port authority. According to the agreement signed in 2016, COSCO reserves the exclusive right to use the land and infrastructure inside the port area.

⁴⁵ https://transport.ec.europa.eu/system/files/2022-09/oem_wp_v.pdf

⁴⁶ https://www.academia.edu/35390610/Chinese_Investment_in_Greece_and_the_Big_Picture_of_Sino_Greek_Relations

Table 2: TEN-T Orient-East Med (OEM) Core Network corridor connections in Greece

| Seaport/Mode of transport | Roads | Railways | Waterways |
|---------------------------|--|--|---|
| Piraeus | Connects to E75 , via Thessaloniki, extends to North Macedonia, Serbia, Hungary (Balkans) into Eastern, Northern Europe | Transport via the Greek rail network (to Thessaloniki) | Piraeus, Patras, Igoumenitsa: sea transport via the Mediterranean Sea (Italy, France, Spain) Igoumenitsa: Adriatic Sea to Italy (Bari, Brindisi) Thessaloniki: connects to the Danube river via a network of rivers and canals |
| Patras | Connects to E55, E65, European routes northward through Central and Northern Europe | Connecting inland to the broader Peloponnese and onwards to Athens/Piraeus and Thessaloniki | |
| Igoumenitsa | Connects to E55 (also on E90 East-West) | Gateway for goods moving between Italy and Greece | |
| Thessaloniki | E75 north (also on E90 East-West, not TEN-T) | Major rail hub in northern Greece Igoumenitsa and Thessaloniki are also part of Railway Corridor X, which connects to the Balkans and Central Europe | |

Source: European Commission, Orient-East Med Corridor. https://transport.ec.europa.eu/transport-themes/infrastructure-and-investment/trans-european-transport-network-ten-t/orient-east-med-corridor_en.

In 2021 the Greek government agreed to give COSCO an extra 16% of the PPA stock, as foreseen in the 2016 agreement. However, the 2016 agreement placed the extra shares under the condition of completion by COSCO of mandatory investments, which COSCO is yet to complete. The agreement in 2021 was reached under the pledge by COSCO to complete the mandatory investments by 2026 or, in case of further delays caused by *force majeure*, by 2031.

Piraeus Consolidation & Distribution Centre (PCDC) is another entity fully owned by COSCO that provides logistics services for PCT. It handles and stores general/dry cargo, refrigerated and deep-frozen goods, flammable products, chemicals, etc. While goods are at PCDC, duties and taxes are not levied on them.

Greece and the Port of Piraeus present an excellent example of the limits of looking exclusively at M&A and the importance of obtaining an accurate picture of greenfield investments too. Chinese acquisitions in Greek transport infrastructure and even more so, in the TEN-T core network are limited to those previously described in the Port of Piraeus. Nonetheless, COSCO presence in the Greek transport infrastructure system is not limited to the port itself. Relevant for the intermodal focus of the analysis proposed in this study is the fact that COSCO's Greece-based subsidiary Ocean Rail Logistics (ORL) owns 60% of the former Greek company Piraeus-Europe-Asia Rail Logistics (PEARL).

COSCO's subsidiary ORL⁴⁷ carries out a service of sea-rail intermodal transportation, with Piraeus serving as the hub that connects Greece, North Macedonia, Serbia, Hungary, Slovakia, Austria and Czechia. ORL also connects Piraeus with terminals in Skopje, Belgrade; the terminals in Budapest and

⁴⁷ <https://www.txlogistik.eu/en/services/ocean-rail-logistics/>

Bratislava owned by the Austrian Rail Cargo Group; a terminal at Dunajská Streda in Slovakia operated by the Czech METRANS; and the container terminal at Enns in Austria.

Although services are provided by ORL, the rail infrastructure is owned by and managed by the Hellenic Railways Organisation (OSE),⁴⁸ and ORL is not the only company that provides freight rail services from Greece to Central and Eastern Europe, and to the Balkans. It is however the company that serves COSCO cargo. ORL provides the connection services along the Trans-Balkan route, the so-called Corridor X (ten) (see Figure 6).

The route is not officially part of the TEN-T, but it connects many of the countries of the OEM corridor via an alternative corridor. Thus, in terms of service, rather than infrastructures, COSCO and ORL compete with the EU in the region. Nonetheless, even though that competition is limited, the Italian-owned Hellenic Train is the rail service provider in Greece, and ORL needs its agreement to provide its services.

The case of ORL brings to light another side of Chinese investments in European infrastructures, the side related to services. Chinese companies may not invest in the EU's TEN-T core network, but if they provide services along the lines, they can still influence significant trade flows in the region. Much like in the case of direct investments, that depends on the size of the presence of the Chinese provider.

Figure 6: Map of Corridor X



Source: Ocean Rail Logistics.

Greece, again, presents a good example of this. The floods that hit Greece in September 2023 have disrupted the rail connections used by ORL; it is forecast that it may take until 2025 and cost EUR 180m to rebuild them⁴⁹. COSCO asked the authorities to ensure their return to operation as soon as possible, but because their reconstruction remains in the hands of the Greek government, the only option COSCO had was to redirect via ship the containers⁵⁰ that should have been moved by trains to the port

⁴⁸ In 2017, during the third bailout and the process of privatisation of Greek assets that followed the euro crisis, [TrainOSE, born as a subsidiary of OSE in charge of operating passenger and freight trains, and now renamed Hellenic Train, was acquired in full by Italian Railways](#) (Ferrovie dello Stato Italiane) for EUR 45m.

⁴⁹ <https://www.railfreight.com/railfreight/2023/09/26/piraeus-sends-containers-to-rijeka-as-greek-rail-is-far-from-operational/>

⁵⁰ <https://www.railfreight.com/railfreight/2023/09/26/piraeus-sends-containers-to-rijeka-as-greek-rail-is-far-from-operational/>

of Rijeka in Croatia.⁵¹ The cargo then proceeds via rail or road towards the destination. It is unclear whether the decision taken by COSCO will have an impact on the speed of the reconstruction and/or on the funding for the work. COSCO had already used alternative routes in late 2015 and early 2016, when, owing to the migrant crisis, the border between Greece and North Macedonia was closed twice for several weeks and the traffic was diverted to the Bulgarian railway network and to Koper port in Slovenia too. When the border reopened, COSCO restarted regular services via rail from the Port of Piraeus, suggesting that the same will happen once the route damaged by the floods in 2023 is operational again, regardless of the timeline.

As explained in the study for the TRAN Committee of the European Parliament, Chinese Investments in European Maritime Infrastructure⁵², the railway transport corridor from Piraeus to Budapest still absorbs small amounts of containers at this stage – less than 200,000 TEUs in 2022.¹⁶ While COSCO ships arrive at Piraeus from Asia, goods are then transhipped to other Mediterranean and Black Sea ports on smaller cargo vessels, known as ‘feeders’. Some of these ports are in EU Member States, such as Cyprus, Italy, Malta, France, Spain, Portugal, Bulgaria and Romania.

As a full risk assessment of Chinese presence in the Port of Piraeus was proposed in the study for the TRAN Committee of the European Parliament, Chinese Investments in European Maritime Infrastructure⁵³, this section focuses on the risks for the intermodal network and the TEN-T.

Risk assessment: Greece

| Impact level / Likelihood | | | | | |
|---------------------------|---------------|--|--|--------|-------------|
| Catastrophic | | | | | |
| Very serious | | Individual dependency risk: Suspension of COSCO operations at Piraeus Hard security risk: COSCO is activated as a maritime militia. PLAN uses Piraeus as a hub to serve regional players | | | |
| Serious | | EU-level dependency risk: Suspension of COSCO and ORL operations and services | Coercion/ influence risk: COSCO and ORL threaten to disrupt traffic via Piraeus and Greece to influence Greece's policy making | | |
| Substantial | | | Cybersecurity/data risk: Chinese companies' and subsidiaries' operations give access to local network and lead to leaks of data | | |
| Limited | | | | | |
| | Very unlikely | Unlikely | Somewhat likely | Likely | Very likely |

Source: Authors' analysis.

Individual dependency risk

As noted earlier in the report, Greece's national intermodal logistics system is still in development and is experiencing delays, which are likely to be exacerbated by the September 2023 flood damage. The integration of the Port of Piraeus into the TEN-T is still incomplete (see Figure 6). Despite the impact

⁵¹ [Three Chinese companies](#) – Chinese Ningbo Zhoushan Port Company Limited, Tianjin Port Overseas Holding Limited and China Road and Bridge Corporation – had initially won the bid to build and operate the new ship container in the Croatian port of Rijeka. However, in January 2021 the Croatian government cancelled the tender and reopened the bidding; the MAERSK-owned APM and Croatian logistics company ENNA Logic were awarded the 50-year concession to build and operate the container terminal.

⁵² [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

⁵³ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

that the disruptions caused by the floods has had on COSCO business, COSCO's influence on the related Greek government actions has been limited. That is probably the result of material limits in terms of capital needed to invest in the reconstruction and the workforce needed. Even though COSCO and ORL use an alternative route that swiftly connects Piraeus to Budapest, Corridor X, both companies are constrained by the limited and slow infrastructural developments within Greece, where both the infrastructure and the services are owned by European companies.

Although Piraeus is an important hub for the Mediterranean, in 2022 only 181,000 TEUs travelled by train, at present the share of its throughput transported via Corridor X is limited to 3.6%. However, if COSCO and/or ORL were to interrupt services in Piraeus, the impact would be severe both in terms of employment and of the economic benefits that the services provided have brought. On a national scale, Greece might face sizeable challenges related to the disruption of the intermodal operations run by COSCO and its subsidiaries, but that would impact other shipping companies as the main service provider, Hellenic Trains, is European.

EU-level dependency risk

As detailed in the report for the TRAN Committee of the European Parliament, Chinese Investments in European Maritime Infrastructure⁵⁴, a rough estimate as to the share of Chinese imports into the European market transshipped via the Port of Piraeus points to a figure between 10% and 15%.

The Greek market accounts for only a small share of all the Chinese goods delivered at the Port of Piraeus. Most containers are transshipped to other countries and are unsealed at the final destination.

A complete breakdown of trade through COSCO, arising from an immediate suspension of the operations of COSCO and ORL, is unlikely. Beijing would have to consider the risk of losing – even if temporarily – Piraeus as a logistics hub and an entry point to markets in the EU and the broader Southeast Europe-MENA region. Chinese producers affected by this development would find it difficult to divert their exports to other markets as mature and large as that of the EU. However, the impact would be severe, given the EU's dependence on Chinese imports transported by sea and then land, including via Piraeus and Corridor X.

If COSCO were to shut its operation in Piraeus altogether, China would lose a significant transshipment hub in the Eastern Mediterranean, Southeast Europe and Central and Eastern Europe. Although other ports in the region have been mentioned as already being used as alternatives to the inland routes, such as the APM-operated port of Rijeka in Croatia, all rely on Piraeus as a hub for transshipment as COSCO does not have another equally well-developed hub in the Mediterranean with direct access to the EU market. Therefore, COSCO would have to rely either on terminals owned by others (and even in that scenario the throughput would be much smaller than the amount transshipped via Piraeus), or on one of its other ports, where COSCO does not have full ownership and from which regional coverage for Central and Eastern Europe and the Balkans would be more cumbersome and potentially more costly.

The risk of dependency for the EU is thus serious, but the scenario is unlikely. The risk stems mostly from the role of Piraeus, rather than that of ORL and Corridor X. In fact, if the OEM corridor intermodal features were completed and if other operators serviced the inland transport of the COSCO shipments, the suspension of the services from ORL would have very limited impact.

⁵⁴ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

Coercion/influence risk

Greece remains one of the most China-friendly EU Member States and its government, like many of its European counterparts, wishes to avoid a head-on clash with Beijing.

Although the complete shutdown of Piraeus port as a form of economic coercion is deemed highly unlikely, the port could be used by Beijing as a lever, given that both Greece and the EU rely on imports that go through Piraeus. However, Piraeus is a major Chinese asset in the Mediterranean, and Beijing would not like to jeopardise it. Reports⁵⁵ have shown that in exercising economic coercion, China is much keener to use levers that do not hurt itself or that carry the lowest possible cost for it. Disruptions to Piraeus would come at a high cost for China. The use of ORL logistical networks as a lever would impact COSCO and Chinese businesses more than those of Greece or the EU. The low volume (currently 3.6% of the overall throughput of Piraeus port) transported via Corridor X means that the impact on Greece of the service suspension would be limited, but COSCO would have to find alternative ways to get the goods to their destination. Those alternatives, as already noted, take longer and are more costly. Furthermore, the suspension of the intermodal services would negatively impact countries in the region with which China is likely to want to maintain a positive relationship, such as Serbia and Hungary.

Cybersecurity/data risk

OSE owns the infrastructure and Hellenic Trains operates the services, and the rail signalling system is owned by OSE. Therefore, both signalling system and scheduling are in the hands of European companies. The risks to cybersecurity and data protection thus do not increase with the presence of COSCO and ORL services.

Nonetheless, the risks identified in relation to COSCO's presence in the Port of Piraeus and of ZPMC as ship-to-shore crane provider are a reason for concern that can be strengthened by the fact that from origin to destination the containers are handled by Chinese companies: COSCO, ZPMC and ORL.

COSCO, ZPMC and ORL have the opportunities and resources to create an infrastructure that would allow them to 'eavesdrop' on Greek state and military services in the broader area of Piraeus and potentially, along the route of the container traffic. The impact could be severe for state, international and military infrastructure (Ministry of Shipping, Coast Guard, Greek Navy, visiting NATO military vessels and global telecoms networks). As described in our previous [study](#), Piraeus is often visited by military vessels from other NATO members, including the US (and there are indications that calls by US military vessels will be more frequent in the future). Thus, it is reasonable to assume that Chinese intelligence services will be interested in collecting data about US and other NATO members' advanced military technologies.

Hard security risk

Concerns over possible military use of Piraeus and the network are not entirely unwarranted, despite assurances by Greek authorities that they would never allow this to happen.

In June 2015 the Chinese government announced that all civilian shipbuilders had to ensure that their new vessels were suitable for military use in emergencies. This new strategy is designed to enable China to convert the considerable potential of its civilian fleet into military strength⁵⁶ to protect strategic lines of communication and maritime support capabilities. In other words, all new COSCO container ships docking in the Port of Piraeus will – in theory, at least – be capable of being converted into military

⁵⁵ <https://merics.org/en/report/fasten-your-seatbelts-how-manage-chinas-economic-coercion>

⁵⁶ http://www.chinadaily.com.cn/china/2015-06/18/content_21036944.htm

vessels at short notice and used in military operations. However, it is unclear if, in the case of these ships carrying weapons or, for example, prohibited items and technologies, they could be transported by ORL using Corridor X. In fact, the shipment would arrive in Piraeus via COSCO, it would be moved to rail using ZPMC cranes, and then transported by ORL services to its destination. The content could remain sealed and unchecked until destination. In such a way, weapons could potentially be delivered to countries without the knowledge of either Greek or EU authorities. In a situation of, for example, sanctions circumvention, this would provide a strong channel for sanctioned items to be delivered to a sanctioned country (such as Russia) that is connected to Greece and to the countries along Corridor X. Greece could stop the transportation of such items if it had to, but it would have to check the content of containers and not just the papers, which would make the flow of goods extremely slow and the process very costly.

Such a scenario would not require turning the port into a military facility, but would entail the potential illegal import of such items within EU and NATO territory. However, Greece's commitment to NATO renders Chinese military activism in the region extremely risky for China. Moreover, in the case of Russia, as China shares a border with that country, it has easier ways to bypass the sanctions, if it wished to do so. Therefore, this is a risk that Beijing would be unlikely to consider taking in relation to Russia but it might consider doing so in instances where the sanctioned countries are less easily reached from China.

2.3. Hungary

SUMMARY OF KEY MESSAGES

- **FDI does not represent the main channel through which China engages with Hungary in the area of transport infrastructure.** Debt instruments, as in the case of the Budapest-Belgrade railway, or various non-financial strategic partnerships, are prevalent.
- **The acquisition of a minority share in the BILK terminal by COSCO Shipping reflects China's growing interest in the rail freight terminals of Hungary,** which serve as vital gateways between the East and the West. Hungarian terminals represent a strategic node in the multimodal shipping routes across Europe, connecting sea and land routes.
- **The growing FDI presence of China also reflects the priorities directly set by the Hungarian government through its Eastern Opening policy.** Increased economic exposure in the future is therefore quite likely.
- **Risks related to policy influence, reaching both national and EU contexts, figure most prominently in the case of Hungary.**
- **Cybersecurity risks arising from smart railyard systems – dependent on Chinese technologies – also call for closer monitoring and evaluation.** The adoption of a holistic cybersecurity strategy for rail freight networks is needed to mitigate leakages of sensitive data and ensure smooth operations.

Background

Hungary's strategic geographical location in central Europe, along with its strong industrial orientation, makes the country an important node in European transshipment networks. This view is shared by China, which envisages within the BRI a China-Europe sea-land express passage⁵⁷ – a multimodal shipping route connecting the Piraeus port with Budapest through railways via Koper and Trieste, all the way to Hamburg. According to Taiwan-based global logistics service provider Dimerco⁵⁸, the unique strength of Hungary as a Central European rail freight hub lies in its operational capacity, accessibility and co-existence with other modes of transport, as well as in stable and favourable Hungary-China relations. Consequently, the importance of Hungarian rail freight has been growing significantly in recent years, gaining increased attention from China. A boost in cargo traffic to Hungary was seen following the COVID-19 pandemic, as goods imports from China surged. Given the overcapacity faced at the Poland-Belarus border in Małaszewicze, the Hungary-Ukraine border crossing of Záhony provided an efficient alternative⁵⁹. Likewise, the subsequent supply-chain bottlenecks created pressures on maritime transport, motivating the increased usage of different transport modes. The Middle Corridor is becoming increasingly important⁶⁰ following the Russian invasion of Ukraine, as strengthened rail links between Central Asia, Turkey, Serbia and Hungary become strategically relevant. Naturally, the significance of the Middle Corridor is predominantly driven by EU-China trade relations, which need diversified trade routes to enable secure, uninterrupted and fast goods shipments between the two regions. Furthermore, with railways forming an integral component of the

⁵⁷ http://www.china-ceec.org/eng/ldrhwh_1/2014bergld/hdxw/201610/t20161020_6828548.htm

⁵⁸ <https://www.railfreight.cn/中欧班列/2022/11/02/最铁运对话中菲行-匈牙利背后的秘密/>

⁵⁹ <https://market-insights.upply.com/en/hungary-a-promising-logistics-hub-for-the-china-europe-connection>

⁶⁰ <https://www.ankasam.org/the-center-of-the-middle-corridor-in-europe-hungary/?lang=en>

EU's decarbonisation efforts, the positioning of Hungary as a gateway between the East and the West can be expected to strengthen further.

On Chinese involvement in Hungarian rail infrastructure, there are multiple projects where the two countries have been closely collaborating. However, it ought to be emphasised that ownership via the FDI channel does not currently represent the major form of Chinese presence. Credit-based transactions and various forms of strategic partnerships between entities from the two countries are prevalent.

The most well-known project is that of the Budapest-Belgrade railway, one of the most prominent BRI investments in Europe. The flagship project, which is currently beset by significant delays and multiple implementation challenges⁶¹, is mainly (85%) financed by loans facilitated by the Chinese Exim Bank⁶², with the remainder provided by the Hungarian state, and so does not fall within the scope of FDI-based infrastructure transactions analysed in this study. It is worth noting that to co-ordinate the renovation of the Hungarian section of the line, a state-owned joint venture (Chinese-Hungarian Railway Non-profit Ltd) between Hungarian State Railways, the Hungarian national railway company, China Railway International Corporation (CRIC) and China Railway International Group (CRIG) was established in 2017, with 85% Chinese and 15% Hungarian participation.

The Budapest Intermodal Logistics Centre (BILK) is the only major instance of Chinese FDI in Hungary's transport infrastructure that has so far been realised. The BILK terminal, located in southern Budapest, is one of the largest and most significant intermodal logistics hubs of Hungary, with the capacity to handle a throughput of 220,000 TEU containers annually⁶³. BILK comprises a railway station and marshalling yard, a bi-modal terminal for combined traffic, and a logistics centre⁶⁴, mostly handling maritime containers. In 2019 COSCO Shipping, indirectly through Ocean Rail Logistics S.A., acquired a 15% stake⁶⁵ in the terminal. The remaining share is owned by Rail Cargo Group, a member of the Austrian Federal Railways (OEBB Group). COSCO Shipping sees the BILK terminal as a bridge between sea and land routes⁶⁶, which justifies the company's interest in the acquisition. Indeed, the advantages of the BILK terminal lie in the presence of regular direct connections to major European ports (including Hamburg, Koper and Rijeka), inland terminals (such as Neuss and Duisburg) and European economic centres, as well as to Southern European and CIS countries. In this regard, the acquisition can be seen as falling within the realms of the wider New Silk Road strategy, and a complementary investment to the so-far unrealised modernisation of the Budapest-Belgrade line. Just prior to COSCO's BILK acquisition, Rail Cargo Group established a direct full container load (FCL) connection, running between BILK in Budapest and Xi'an⁶⁷, roughly 7,000 km along the Silk Road (via Kazakhstan, Russia and Ukraine). The connection boasts a record transit time of 10 days.

In addition, there are numerous supplementary China-Hungary initiatives in the area of transport infrastructure, which together are intended to build a strong logistics ecosystem in the country and support the objectives pursued by the BRI. In large part, the association of such initiatives with the BRI is explicitly mentioned, but the ownership structure or financing obtained from the Chinese side

⁶¹ <https://www.construction-europe.com/news/budapest-belgrade-railway-hits-a-roadblock/8031849.article>

⁶² <https://www.railjournal.com/financial/loan-agreed-for-us-1-78bn-budapest-belgrade-upgrade/>

⁶³ <http://railcargobilk.hu/index.php/en/about-us>

⁶⁴ <https://www.porttechnology.org/news/hpc-submits-plans-to-optimise-bilk-intermodal-terminal/>

⁶⁵ <https://rch.railcargo.com/en/news/rail-cargo-terminal-bilk-ocean-rail-logistics-agreement>

⁶⁶ <https://bbj.hu/business/industry/deals/china-s-cosco-acquires-stake-in-budapest-cargo-terminal>

⁶⁷ <https://www.railcargo.com/en/news/first-connection-between-xian-and-budapest>

remains vague. For instance, the Central European Trade and Logistics Cooperation Zone⁶⁸ – a BRI-linked company based in Budapest and Beijing – plans trade and logistics-related investments of over EUR 200m, including the establishment of the Csepel Freeport Logistics Park. Similarly, the CELIZ consortium⁶⁹ led by MÁV-REC Kft and supported by the BRI, intends to advance the industrial development of the region around Záhony, a key entry point for rail cargo into the EU from Asia. There are further strategic partnerships in other transport modes, including the Memorandum of Understanding⁷⁰ signed between Budapest Airport and Xi'an Xianyang and Zhengzhou international airports to enhance cargo connections.

In this context, it is important to note that the overall growing presence of China in the Hungarian economy via FDI is not only the reflection of market-seeking and other motives pursued by Chinese entities, but also reflects the policy priorities directly set by Hungary's government. The country adopted the 'Eastern Opening' policy⁷¹ in 2012, reacting in part to the investment slowdown from the West resulting from the global financial crisis, aiming to attract increased inward FDI from Asian countries (notably China). Subsequently, Hungary was the first Central Eastern European economy to sign a MoU regarding the BRI in 2015. Thus, in the case of Hungary, one finds an overlap between the priorities and objectives pursued by the BRI and that of the Eastern Opening policy, which may not necessarily align to those set by the EU overall. As such, the country holds frequent bilateral meetings with China to strengthen investment relations, and has expressed commitment⁷² to 'remain the number one destination for Chinese companies in the region', as stated by the minister of foreign affairs and trade during his visit to China in 2023. Hence, the strong economic and political partnership between Hungary and China paves the way for further investments going forward, whereby rail and other modes of transport infrastructure are likely to fall within areas of high interest from both sides.

Benefits drawn from the investment

Given that the only direct infrastructure investment in question represented the acquisition of a relatively minor stake (15%), it cannot be regarded as a transformative investment in itself. However, as trade and investment linkages between Hungary and China are strengthened via multifaceted co-operation along the rail network (not limited to COSCO's 15% stake in the BILK terminal), there are certain associated benefits that arise. One can anticipate positive economic impacts from Hungary's positioning as a Central European logistics hub, facilitating East-West trade. The development of an enhanced East-West trade route around the time of the BILK acquisition – as seen from the commencement of the fast Budapest-Xi'an FCL route – points to the operational improvements stemming from the investment. As COSCO has voiced its intentions to improve the efficiency of the terminal following the acquisition of its minority stake, further operational gains may arise, although these have yet to be formally assessed or documented. There are also indirect effects, owing to a well-developed freight network between the two countries. Hungary has been seeing increased FDI activity from China in other sectors – including the largest single foreign investment ever recorded in the country, by Contemporary Amperex Technology Co., Limited (CATL⁷³), a battery production plant in Debrecen. Following the announced investment, the city of Debrecen began to modernise⁷⁴ its railway

⁶⁸ <https://cecz.eu/en>

⁶⁹ <https://celiz.org/rolunk/?lang=en>

⁷⁰ <https://www.aircargonews.net/cargo-airport/budapest-airport-strengthens-logistics-links-with-chinese-hubs/>

⁷¹ <https://link.springer.com/article/10.1007/s10308-020-00592-1>

⁷² <https://hungarytoday.hu/new-chinese-investments-sustaining-economic-growth/>

⁷³ <https://www.catl.com/en/news/983.html>

⁷⁴ <https://www.railfreight.com/railfreight/2023/09/06/could-investments-in-hungary-twist-china-europe-connections/>

to strengthen the supply chain between Hungary and China, seen as a crucial source of competitive advantage of the destination country.

Downside of the investment

Similar to the benefits, the minority stake held by COSCO in the BILK terminal limits the magnitude of impact. However, one challenge in recent times is the issue of overcapacity. As outlined by Hamburg Port Consulting⁷⁵, the BILK terminal has been experiencing significant growth in traffic volumes, particularly from Eurasia, which strain operational procedures and can pose risks to workers' safety. Furthermore, it notes increased shares of non-stackable cargo, which leads to questions regarding the suitability of the current terminal layout and processes. Such developments are likely to require further investments to adapt to changing operating conditions.

Risk assessment: Hungarian rail networks

| | | | | | |
|---------------------|---|---|--|--|--------------------|
| Catastrophic | | | | | |
| Very serious | | | | Coercion/influence risk: Strong bilateral economic and political relations open up space for influence over national and EU policies | |
| Serious | Hard security risk: Leveraging the acquisitions of rail terminals for military purposes | | Cybersecurity/data risk: Leaks of sensitive data through the use of Chinese networks and 'smart railyard' solutions Individual dependency risk: Growing exposure to Chinese capital in Hungarian rail networks (via further FDI, joint ventures and collateralised loans) leads to loss of control over the country's logistics management | | |
| Substantial | | EU-level dependency risk: Complete breakdown of trade through COSCO | | | |
| Limited | | | | | |
| | Very unlikely | Unlikely | Somewhat likely | Likely | Very likely |

Source: Authors' analysis.

Individual dependency risk

At present, exposure to Chinese ownership in Hungary's infrastructure networks remains rather minor. However, given the country's Eastern Opening policy and other forms of political support directed at Chinese inward FDI, growing exposure to Chinese ownership in the area of transport infrastructure projects is quite likely. This is further augmented by strategic partnerships in the sector as well as debt-based transactions, which tend to be collateralised. Hence, the individual dependency risk needs to be continuously and carefully monitored.

At the same time, there is relatively small scope for over-exposure to a single intermodal terminal in Hungary such as BILK, given a relatively well-diversified base. Recent developments of major terminals

⁷⁵ <https://www.porttechnology.org/news/hpc-submits-plans-to-optimise-bilk-intermodal-terminal/>

in Hungary further support this point, such as the large-scale East-West Gate Terminal (EWG)⁷⁶ located close to the intersection of Hungary, Slovakia and Ukraine, which started operations in 2022, or the newly announced Zalaegerszeg terminal⁷⁷ by METRANS (a company of HHLA), intended to strengthen connectivity with Southern Europe. Nevertheless, most of the recent developments in Hungarian rail freight have embedded in them the objectives of a New Silk Road – indeed, the EWG⁷⁸, as well as the Zalaegerszeg⁷⁹ both explicitly claim to become ‘the gateway of the New Silk Road’, as does BILK. Hungary’s growing specialisation in the area of East-West cargo handling therefore gives rise to direct economic dependencies on the trade performance between China and Europe.

Furthermore, looking at the ownership structure of the BILK terminal, it should be noted that Hungary did not have much control and influence over the terminal to begin with. Instead, it was fully held by the Austrian OEBB, which sold a minority share to COSCO. In similar ways, many new infrastructure projects (such as Zalaegerszeg) leave operational decisions fully in the hands of foreign entities, which ultimately shape the country’s logistics management.

EU-level dependency risk

Owing to the diversified structure of terminals in Hungary (as mentioned above), as well as the relatively well-developed freight transport in neighbouring Central European economies, the dependency of a single node within the country to facilitate transshipment across the EU is rather unlikely. The vast majority of Hungarian rail freight remains under the ownership of EU entities, with many of these managing a wider intermodal network across Europe, such as HHFA or OEBB. The development of new terminals by these actors further dilutes third-country ownership, although new investments from China are quite likely in view of the overlap in interests between the BRI and Eastern Opening. As the larger European infrastructure systems become increasingly intertwined with COSCO’s stakes, the EU-wide dependency risks stemming from the Hungarian node naturally become larger. However, considering the strong trade ties between Europe and China, a breakdown in the trade flows is rather unlikely, as both parties would accrue substantial economic losses.

Coercion/influence risk

Coercion and/or influence risk represents the most important risk area in Hungary at present. As Hungary prioritises the development and maintenance of strong relations with China, and as its economy becomes increasingly intertwined with Chinese capital, indirect risks arise from the newly forming dependencies. This is not an issue limited to/stemming from FDI in the area of transport infrastructure, but rather from the overall economic policy direction taken by Hungary. Over-reliance on a single partner for inward FDI and trade, particularly when vast differences in market size result in clearly asymmetric bargaining positions between Hungary and China, open up space for policy influence. At the same time, the need to keep Chinese investors satisfied, combined with the institutional shortcomings Hungary struggles with, may lead to the undertaking of financially inefficient projects, major loan obligations, and the disbursement of investment support measures that outweigh associated economic benefits. Furthermore, the coercion/influence risks can spill over from national policymaking to encompass EU policymaking also. In this sense, the position of Hungary

⁷⁶ <https://eastwestil.com/en/>

⁷⁷ <https://metrans.eu/construction-of-the-new-metrans-terminal-in-zalaegerszeg-has-started/>

⁷⁸ <https://eastwestil.com/en/terminal/>

⁷⁹ <https://www.hafen-hamburg.de/en/press/news/rail-subsi-dary-metrans-to-expand-network-through-investment-in-hungary-37128/>

is quite similar to that of Greece, as one of the most China-friendly EU Member States, which could be relied on by Beijing in the case of an international crisis.

Cybersecurity/data risk

Cybersecurity in Hungarian intermodal terminals represents a potentially serious risk area, as the interconnected and technologically advanced nature of rail systems gives rise to a range of threats. For instance, the newly-built EWG terminal in Eastern Hungary, dubbed 'the world's first smart 5G railyard'⁸⁰ by Huawei, relies heavily on its network provision and advanced technologies such as artificial intelligence and sensors to operate cranes and remotely control the container terminal premises. Such systems open up increased space for cyber-attacks targeting critical infrastructure components. Vulnerabilities in these systems may be exploited to disrupt railway operations, endanger safety, and compromise sensitive data. To mitigate these risks and to react to the increased digitalisation of terminals, the adoption of a holistic cybersecurity strategy for rail freight networks is needed, which would entail continuous monitoring, employee training, and collaboration with relevant authorities, to ensure the resilience and security of their operations.

Hard security risk

The interconnectedness of inward FDI in the area of transport infrastructure with military motives is highly unlikely. Hence, while the implications would be serious, the hard security risk is quite limited. However, looking at Hungary's interactions with China, there have been some efforts to strengthen military co-operation between the two countries in recent times. This is demonstrated by meetings between their defence ministers (most recently in 2021), at which they have expressed the will to maintain close high-level exchanges and deepen pragmatic co-operation in the military field. Hungary has also expressed its support for the safeguarding of China's interests. However, these developments are seen to feed more closely into the themes discussed in the area of coercion/influence risks, rather than to constitute hard security risks per se.

⁸⁰ <https://www.huawei.com/en/media-center/our-value/the-world-first-smart-rail-logistics-terminal>

2.4. Serbia

SUMMARY OF KEY MESSAGES

- **China uses debt policies as the main instrument to engage with Serbia in the area of transport infrastructure.** Chinese-funded infrastructure projects, such as the Budapest-Belgrade railway and strategic partnerships, are common policies by China to gain a geoeconomic foothold in Serbia.
- **China wants to transform Serbia into a European hub for infrastructure investments (alongside Greece, with its Port of Piraeus).** Because of Serbia's attractive geographical position in Southeast Europe, China aims to include the country in its China-Europe sea-land express passage.
- **Serbia's economic exposure to China is likely to rise** as one of its strategic priorities is to increase China's FDI presence in the country.
- **China's geoeconomic interest in the Serbian infrastructure increases risks related to policy influence,** particularly given Serbia's EU accession aspirations.
- **Serbia's reliance on China as a supplier for its IT sector,** with Huawei being the most important partner, exposes cybersecurity issues and vulnerabilities.

Background

Over the past decade, China has emerged as one of the most important trading partners in the Western Balkans, particularly in Serbia. Of Chinese-led projects in the region between 2013 and 2021, 61 had been implemented in Serbia, with a total value of EUR 18.77bn⁸¹. Serbia has the largest economy in the Western Balkan region, with its growth spurred by EU and Chinese investments. It is evident that China has managed to expand its position as a net investor in Serbia. Chinese net FDI inflows increased from EUR 2.4m to about EUR 1.4bn⁸² from 2010 to 2022. Chinese investment in Serbia is directed primarily into the country's infrastructure and energy sectors. These projects are financed via loans, which is why Serbia needs to provide state guarantees⁸³ to facilitate their realisation – this in turn increases China's influence over Serbia as a large-scale foreign investor. Serbia's indebtedness to China is problematic, as not much is known about the non-transparent conditions of the loan contracts. In Montenegro, reports emerged that such state-guaranteed loan agreements also included clauses facilitating the transfer of land or assets to Chinese creditors if the country was no longer able to service the loan at some point⁸⁴.

Chinese interest in Serbia as an investor is clear: the country is geographically located in a vital position in Southeast Europe for China's BRI, which is why China included Serbia in its China-Europe sea-land express passage⁸⁵, a multimodal shipping route connecting the Port of Piraeus via Koper and Trieste to Hamburg. With the potential accession of Serbia into the EU, the country could become the most important European hub for Chinese infrastructure investments, alongside Greece. Examining China's involvement in the Serbian rail infrastructure sector, there are multiple projects in which the two countries have been

⁸¹ <https://www.swp-berlin.org/10.18449/2023C36/>

⁸² <https://www.swp-berlin.org/10.18449/2023C36/>

⁸³ <https://www.bertelsmann-stiftung.de/en/our-projects/germany-and-asia/news/asia-policy-brief-chinas-economic-footprint-in-the-western-balkans#link-tab-157270-10>

⁸⁴ <https://www.derpragmaticus.com/r/serbien-china>

⁸⁵ http://www.china-ceec.org/eng/ldrhwh_1/2014berglid/hdxw/201610/t20161020_6828548.htm

closely collaborating. It should be emphasised, nevertheless, that Chinese involvement does not yet primarily manifest itself through ownership with FDIs. Credit-based transactions and various forms of strategic alliances between Serbian and Chinese companies are more common.

The proper political launch of a comprehensive strategic partnership in infrastructure between the governments of Serbia and China can be traced back to the aftermath of the global financial crisis, with the Agreement on Economic and Technical Cooperation for infrastructure projects⁸⁶, signed by both countries in 2009. China realised its plans to invest into the Serbian railway sector in 2014, with the governments of Serbia, Hungary and China signing an MoU⁸⁷, stating their intention to modernise the Corridor X railway link, connecting the Serbian capital of Belgrade with the Hungarian capital of Budapest (Figure 7). Because of plans to extend the railway via North Macedonia to the Chinese-owned Piraeus port in Greece (as part of the BRI), representatives of the North Macedonian government were also present at the signing ceremony. In 2015 (as part of the 16+1 summit), China, Hungary and Serbia signed the Budapest-Belgrade high-speed railway construction project. The rail link, financed by the Export-Import Bank of China, remains one of the largest infrastructure projects in the Western Balkans. The project's costs had been announced as around EUR 2.6bn – the Exim Bank agreed to finance the project through a 20-year EUR 1.6bn loan with Hungary and a EUR 1.2bn loan with Serbia⁸⁸. Those loans should cover 85% of the project's cost, with the remaining 15% covered by the governments of Serbia and Hungary. The construction of the Budapest-Belgrade rail link began in 2017 and Serbia officially opened the first section⁸⁹ between Novi Sad and Stara Pazova in August 2021. The Belgrade-Niš section of the rail link will be renovated with EU funds, instead of Chinese financing⁹⁰. The European Commission justified the funding of the Belgrade-Niš section by citing the EU's interest in pursuing its enlargement policy by investing in critical infrastructure in the Western Balkans.

Figure 7: Route of the Budapest-Belgrade rail link



Source: [Euronews](#)

⁸⁶ http://demo.paragraf.rs/demo/combined/Old/t/t2013_12/t12_0017.htm

⁸⁷ <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=8975873&fileId=8976118>

⁸⁸ <https://thediomat.com/2020/04/china-and-the-budapest-belgrade-railway-saga/#:~:text=The%20Export%20Import%20Bank%20of,the%20Serbian%20and%20Hungarian%20governments>

⁸⁹ <https://www.investigate-europe.eu/posts/from-budapest-to-belgrade-a-railway-line-increases-chinese-influence-in-the-balkans>

⁹⁰ <https://www.investigate-europe.eu/posts/from-budapest-to-belgrade-a-railway-line-increases-chinese-influence-in-the-balkans>

In 2019 China managed to sign two additional agreements with the Serbian government⁹¹ aimed at facilitating Chinese investments into Serbian railway modernisation and reconstruction projects. The two contracts cover the modernisation of the Novi Sad-Subotica line (a section of the Budapest-Belgrade line), as well as the reconstruction of the Belgrade-Niš-Preševo line. The cost of the modernisation of the latter was estimated at EUR 760m and covers 286 km of track. The project should also provide a new rail connection with North Macedonia at the Serbian-North Macedonian Preševo border. The Novi Sad-Subotica modernisation project aims to construct a third section of the Belgrade-Budapest rail link. The project includes the construction of a double-track railway between Novi Sad and Subotica and the modernisation of an existing 108-km rail line.

China is also involved in various road and bridge construction projects. One of the most important projects was the highway E-763 (Corridor 11) construction, aimed at connecting Belgrade's motorway to the Montenegrin border. A bridge connecting the neighbourhoods of Zemun and Borca in Belgrade was also built by the China Road and Bridge Corporation, with funding from the Exim Bank⁹². There are also transportation infrastructure initiatives aimed at strengthening Serbia's logistics ecosystem with the Chinese BRI. In June 2023 Serbian and Chinese companies signed contracts worth over EUR 470m⁹³ aimed at intensifying bilateral ties within the framework of the BRI. In October 2023 the Serbian government decided to take out a EUR 149.2m loan from China's Export-Import Bank⁹⁴ to facilitate the financing of the construction of a bridge over the Danube river and a bypass road in Novi Sad. Also in October 2023, Serbia's president finally signed the long expected free-trade agreement between China and Serbia at the third Belt and Road Forum for International Cooperation in Beijing.

China is not focusing only on physical infrastructure investments in Serbia. Chinese companies have already put themselves into 'pole position' as supplier for Serbia's IT sector⁹⁵. One of Serbia's most important partners in the IT sector is China's Huawei⁹⁶. The Serbian government particularly promotes the establishment of 'smart cities' with the aid of China, focusing on Belgrade, Novi Sad and Niš. To accelerate this project, the government signed a declaration of intent with China in 2019⁹⁷, as part of the Belt and Road Forum for International Cooperation.

Benefits drawn from the investment

China's plan to transform Serbia into a European hub for transport infrastructure investments and to include the country in its China-Europe sea-land express passage can be expected to have a positive impact on Serbia's economic development. Serbia already benefits as a result of the influx of Chinese capital. Serbia's involvement in the development of an enhanced East-West trade route, particularly through the Budapest-Belgrade high-speed railway construction project, could also have a positive effect on employment prospects in the country, even though the management of these infrastructure projects by Chinese companies has often resulted in a workforce consisting predominantly of Chinese workers⁹⁸. The construction of a Budapest-Belgrade high-speed railway also holds the potential to reduce cargo travel times between Serbia and Hungary. The construction of a double-track railway between both capitals could increase the line speed to 200 km/h on the Serbian section⁹⁹. Prior

⁹¹ <https://www.railwaypro.com/wp/serbia-and-china-signed-two-railway-agreements/>

⁹² <https://consultancy.birn.eu.com/wp-content/uploads/2020/05/China-in-the-Western-Balkans-April-2020.pdf>

⁹³ <http://en.people.cn/n3/2023/0616/c90000-20032543.html>

⁹⁴ <https://seenews.com/news/serbia-to-take-1492-mln-euro-loan-from-chinas-export-import-bank-for-bypass-road-danube-bridge-836993>

⁹⁵ <https://www.gtai.de/de/trade/serbien/specials/serbien-wird-wichtiger-hub-in-chinas-digitaler-seidenstrasse-570736>

⁹⁶ <https://foreignaffairs.house.gov/china-regional-snapshot-western-balkans/>

⁹⁷ <https://www.gtai.de/de/trade/serbien/specials/serbien-wird-wichtiger-hub-in-chinas-digitaler-seidenstrasse-570736>

⁹⁸ <https://thediplomat.com/2023/08/is-china-facilitating-corrosive-capital-in-serbia/>

⁹⁹ <https://www.euronews.com/my-europe/2020/10/06/will-the-4bn-belgrade-budapest-rail-upgrade-be-a-benefit-or-burden>

to closure of its southern end of the railway due to reconstruction in 2019, the Serbian section was used by 85 freight trains daily¹⁰⁰ and the Hungarian section by 47.

Downside of the investment

The downside from Chinese investments stems from dependency issues. Serbia heavily relies on Chinese FDI for its economic output. This reliance makes Serbia vulnerable to Chinese influence over national policies. Unlike loans from the EU, loans granted by China are not limited by policy constraints. This is why China's involvement in Serbian infrastructure projects has exposed disparities between the legal and regulatory frameworks of China and the EU, including transparency in tender procedures, environmental issues and working conditions at some Chinese SOEs.

Individual dependency risk

Even though direct exposure to Chinese ownership in Serbian infrastructure remains limited, close economic and political relations between Serbia and China, including Serbia's reliance on Chinese FDI, increase the likelihood of exposure to Chinese ownership in the area of transport infrastructure projects. Strategic partnerships between China and Serbia in infrastructure sectors, as well as debt-based transactions, need to be closely monitored. The risk of exposure to Chinese ownership is heavily affected by future infrastructure agreements between Serbia and China. In October 2023 the Serbian government signed two new roadbuilding agreements with China, worth some EUR 4bn¹⁰¹, including a contract for the procurement of five high-speed trains, worth EUR 54m. Exact details on the financing of those projects have yet to be published by the Serbian government.

Risk assessment: Serbia's rail networks

| | | | | | |
|---------------------|----------------------|---|---|--|---|
| Catastrophic | | | | | |
| Very serious | | | | | Coercion/ influence risk: Robust bilateral economic and political relations make Serbia vulnerable to influence over national policies |
| Serious | | | Individual dependency risk: Chinese ownership in the area of transport infrastructure through exposure to Chinese capital in rail and road networks EU-level dependency risk: China significantly expands its footprint in Serbia and threatens EU influence in the region | Cybersecurity / data risk: Exposure of sensitive data through Serbia's use of Chinese IT companies and 'smart city' solutions | |
| Substantial | | Hard security risk: Utilising rail and road infrastructure for military purposes | | | |
| Limited | | | | | |
| | Very unlikely | Unlikely | Somewhat likely | Likely | Very likely |

Source: Authors' analysis.

¹⁰⁰ <https://www.euronews.com/my-europe/2020/10/06/will-the-4bn-belgrade-budapest-rail-upgrade-be-a-benefit-or-burden>

¹⁰¹ <https://www.barrons.com/news/china-serbia-sign-roadbuilding-train-deals-8adab685>

EU-level dependency risk

It is evident that Serbia's strategic priority is to increase China's FDI presence in the country, which is why the country's economic exposure to China is very high. By 2022 Chinese investment in Serbia had surged to the level of the combined investments by all 27 EU Member States.¹⁰² Nevertheless, EU entities are still prominently represented in Serbia's rail sector, either through subsidiaries or investments. Notably, Austrian Federal Railways (OEBB) was able to establish the Rail Cargo Carrier-Southeast as a new subsidiary in Serbia in January 2023¹⁰³. It had been registered as a freight operator within the country and was tasked to carry transit freight from Turkey and Greece to Central and Southeast Europe. In addition, the European Bank for Reconstruction and Development (EBRD), the EU and the European Investment Bank (EIB) supported the establishment of the Belgrade-Niš high-speed rail line with a EUR 2.2bn investment package in February 2023. The package includes an EUR 1.1bn loan from the EIB, an investment grant of EUR 598m from the EU, and a EUR 550m EBRD loan, the largest EBRD loan for a single project within Serbia¹⁰⁴ to date. The presence of these actors further dilutes third-country ownership in the Serbian rail sector.

Should Chinese investment into the country grow further and allow it to establish more control over Serbia's infrastructure, the EU's position might be weakened. If Serbia becomes the most important European hub for Chinese infrastructure investments (alongside Greece, and its Piraeus port), Chinese firms could secure a comprehensive footprint that facilitates market share acquisition and connected dependency risks. Furthermore, the dependency risks could also translate to intermodal hinterland connections, including the TEN-T corridors.

Coercion/influence risk

China is a major investor in Serbian industry and infrastructure. According to the Serbian central bank, the value of Chinese investments into Serbia had reached EUR 1.4bn in 2022¹⁰⁵, making China the largest single investor in Serbia. Close economic ties with China leave Serbia vulnerable to influence over national policies. A higher share of investments from China could also exacerbate Serbia's macroeconomic imbalances. Here, a severe risk stems from Serbia's growing trade deficit with China, making the country even more vulnerable to soft-power influence. Those trade imbalances were particularly evident in 2021, when Serbian exports to China amounted to EUR 329m, while the share of Chinese imports stood at EUR 2.88bn¹⁰⁶; China accounted for almost half of Serbia's EUR 5.9bn trade deficit (EUR 2.55bn) that year. Owing to these imbalances, coercion and influence risks are higher for Serbia than for any other country in the Western Balkan region.

Cybersecurity/data risk

China is a vital supplier for Serbia's [IT economy](#). This reliance, coupled with the Serbian government's intention to develop 'smart cities' across the country, leaves Serbia open to cybersecurity risks. One of Serbia's most important partners in the IT sector is the Chinese company Huawei. The company was already integrated into the Serbian rail sector in 2013, after signing a framework agreement with the

¹⁰² <https://chinaobservers.eu/how-did-china-become-the-largest-investor-in-serbia/#:~:text=By%202022%2C%20Chinese%20investment%20in,nature%20of%20their%20bilateral%20engagement>

¹⁰³ <https://www.railjournal.com/freight/rail-cargo-group-launches-serbian-subsiary/>

¹⁰⁴ <https://www.ebrd.com/news/2023/ebd-eu-and-eib-support-highspeed-rail-in-serbia-with-22-billion-.html>

¹⁰⁵ https://www.swp-berlin.org/publications/products/comments/2023C36_WesternBalkans.pdf

¹⁰⁶ <https://www.balkanicaucaso.org/eng/Areas/Serbia/Serbia-between-China-and-Europe-208757>

Serbian Railways Corporation (ZS)¹⁰⁷. Under the agreement, Huawei was tasked to provide ZS with digital railway solutions in 2013-2018, as a measure to support the railway transportation company in facilitating the infrastructure modernisation of the Corridor X Niš-Sid rail line. Huawei is also deeply involved in the government's 'smart city' programme. In 2022 the government installed several thousand Huawei smart cameras¹⁰⁸ throughout public spaces in the Serbian capital Belgrade. Nevertheless, the cameras are not yet in full operation as the government is yet to legalise mass biometric surveillance in Serbia¹⁰⁹.

Hard security risk

Hard security risks in the area of Serbia's transport infrastructure are very limited. Leverage of Chinese FDI in Serbia's transport infrastructure to further military motives is also unlikely. Nevertheless, military co-operation between Serbia and China has increased in the past decade. China was the second-largest donor to the Serbian army between 2008 and 2018¹¹⁰, with donations of EUR 4.6m, behind only the US (EUR 8.8m), according to information released in 2019 by the Serbian Ministry of Defence. In addition, Chinese police and Serbian special forces collaborated in an anti-terrorism drill in Serbia¹¹¹ in November 2019, which illustrated China's wish to protect its interests and nationals abroad. China's military power projection in Serbia was also seen in the delivery of weapons to the country. In 2022 Serbia procured Chinese HQ-22 surface-to-air missiles¹¹², which were delivered by a dozen Chinese Air Force transport planes – one of the largest airlift deliveries of Chinese arms to Europe to date. Serbia's procurement of Chinese weapons systems illustrates that the country intends to modernise its military hardware, with China as arms supplier. Lastly, in March 2021 Serbia expressed its intention to strengthen military co-operation with China¹¹³, with its president expressing gratitude towards China for fighting the COVID-19 pandemic, safeguarding Serbia's national security and supporting the country's economic development.

¹⁰⁷ <https://www.ciol.com/serbian-railways-appoints-huawei-digital-railway-solutions/>

¹⁰⁸ <https://balkaninsight.com/2021/12/28/serbias-personal-data-commissioner-huawei-cameras-a-dangerous-decision/>

¹⁰⁹ <https://edri.org/our-work/serbia-government-retracts-again-on-biometric-surveillance/>

¹¹⁰ <https://nationalinterest.org/feature/dragon-lands-belgrade-drivers-sino-serbian-partnership-201294?page=0%2C1>

¹¹¹ <https://nationalinterest.org/feature/dragon-lands-belgrade-drivers-sino-serbian-partnership-201294?page=0%2C1>

¹¹² <https://www.aljazeera.com/news/2022/4/30/serbia-shows-off-china-missiles-amid-build-up-concerns-in-balkans>

¹¹³ <https://news.cgtn.com/news/2021-03-27/China-Serbia-agree-to-strengthen-military-cooperation-YXVkv3W6Ws/index.html>

2.5. Turkey

SUMMARY OF KEY MESSAGES

- **China's interest in the Middle Corridor has been limited**, owing to its preference for the Northern Corridor, which is more cost-effective, **but the Middle Corridor has been gaining importance** as an alternative to the Northern Corridor, which passes through Russia.
- **Increased investment in the Middle Corridor has the potential to eradicate bottlenecks** while enhancing social, economic and territorial cohesion across the region. Increased traffic in the Middle Corridor, as a substitute for the Northern Corridor, could play a pivotal role in fostering economic development in the region.
- **A critical challenge facing TEN-T is how projects will need to be adapted to the BRI developments** in order to avoid duplication. Absence of adequate planning can lead to congestion, which means costly delays or rerouted traffic.
- Although the BRI provides Turkey with the opportunity to secure funding for significant construction projects, it also raises **concerns about potential debt problems**.
- If China were to increase its investment in Turkey, there would be an **increased risk of excessive Chinese influence in the country**.
- Additionally, Chinese investment in Turkey may contribute to an **amplification of Chinese influence in the region**, rather than that of the EU.
- **Ongoing conflicts isolate Armenia and worsen regional connectivity**. Increased Chinese investment may intensify these divisions.

Background

Turkey came up with the idea of a 'Middle Corridor'¹¹⁴, a transportation route that extends from Turkey to China, in the late 1980s. This vision gained momentum following the collapse of the Soviet Union¹¹⁵, which opened up former Soviet Central Asia as an independent market of countries. Officially named the Trans-Caspian International Transport Route (TITR)¹¹⁶, the Middle Corridor aims to establish a [link](#) between the containerised rail freight transport networks of China and the EU. This route spans Central Asia, the Caucasus, Turkey and Eastern Europe. Originating in Turkey, it extends through Georgia to Azerbaijan, then traverses the Caspian Sea to reach Turkmenistan and Kazakhstan. From there, it continues through other Central Asian Republics, Afghanistan and Pakistan, ultimately reaching the People's Republic of China (see Figure 8).

The Middle Corridor is often seen as a less favoured option. Despite its shorter distance than the Northern Corridor (7,000 km compared with 10,000 km), the uncertain timeline at border crossings can lead to a wide range of journey durations, which can vary from 14 to 60 days depending on the circumstances. However, owing to the Russian war of aggression against Ukraine, the Middle Corridor could become increasingly significant as an alternative route for transporting cargo between Asia and Europe. Most of the railway freight moving between Asia and Europe still passes through Russian territory, and at present this route has not been subjected to any sanctions. Nevertheless, cargo owners and railway operators in Europe are keen on diversifying their intercontinental services by exploring

¹¹⁴ https://www.mfa.gov.tr/turkey_s-multilateral-transportation-policy.en.mfa

¹¹⁵ <https://carnegieendowment.org/2023/05/05/china-s-response-to-t-rkiye-s-volatile-authoritarianism-pub-89690>

¹¹⁶ <https://middlecorridor.com/en/route>

alternative corridors that circumvent Russia¹¹⁷. One significant factor driving this exploration is heightened security concerns (and increased public awareness). This has made many cargo owners hesitant to use the traditional route through Russia. The transported volumes between EU hubs and China via the Northern Corridor saw a significant decline of 37.5% in 2022 from the 2021 level (618,180 TEUs in 2021 to 386,374 TEUs in 2022)¹¹⁸.

Figure 8: Main Europe-Asia transport corridors



Source: [Stiftung Wissenschaft und Politik – Deutsches Institute für Internationale Politik und Sicherheit](https://www.wissenschaftundpolitik.de/en/our-work/analyses-and-reports/alternative-routes-from-china-to-europe/)

Turkey sees the BRI as a complementary initiative to its own Middle Corridor. The land connection with the BRI consists of two important routes: the first component is the Baku-Tbilisi-Kars (BTK) Railway Line, and the second is the envisaged Edirne-Kars High-Speed Railway Line, which is supposed to run from the eastern border in Georgia to the western border in Bulgaria.

The most important achievement along this route is the BTK line, which links Kars in Turkey to Tbilisi in Georgia and Baku in Azerbaijan. The BTK line is the first direct rail link between the three countries, and allows movement of freight carriage onto the ferries in Alat Port in Azerbaijan. The project emerged in 1993 as a response to Turkey's closure of the rail link from its eastern city of Kars to Gumru in Armenia due to the Nagorno-Karabakh conflict.¹¹⁹ Despite lingering in abeyance for years, the project gained traction in 2007 when officials from Azerbaijan, Georgia and Turkey convened in Tbilisi to formalise an agreement for the line's construction. Initially, international organisations such as the EU, the EBRD and the Asian Development Bank refused to provide funding, because of concerns that the project bypassed Armenia. As a result, the three countries had to self-finance it. Although Azerbaijan and Turkey secured their funding, Georgia encountered challenges. To address this,

¹¹⁷ <https://thediplomat.com/2023/09/the-truth-about-eurasian-rail-freight-transport/>

¹¹⁸ <https://www.ebrd.com/work-with-us/projects/esia/ispartakule-erkezky-railway-project.html>

¹¹⁹ <https://www.forbes.com/sites/wadeshepard/2016/12/15/reconnecting-asia-the-story-behind-the-emerging-baku-tbilisi-kars-rail-line/?sh=444a54d23978>

Azerbaijan's State Oil Fund (SOFAZ) extended loans amounting to about EUR 393m, ensuring the project's successful completion¹²⁰. The rail link was eventually inaugurated in October 2017.

The second component of the Middle Corridor is the 2,000-km Edirne-Kars line, which will link the BTK line to Europe. In November 2015 Turkey and China signed a MoU aimed at aligning their respective BRI and Middle Corridor initiatives¹²¹. This agreement has paved the way for discussions regarding collaboration on pivotal projects, one of which is the proposed high-speed rail connection between Kars and Edirne. The planned rail line has an estimated cost of around EUR 27bn¹²².

The Ankara-Istanbul leg of the route has been already constructed by a Chinese-Turkish consortium¹²³, which secured the contract in 2005. This consortium included the China Railway Construction Corporation and the China National Machinery Import and Export Corporation, in partnership with Turkish firms Cengiz Construction and Ibrahim Cecen Ictas Construction. The constructed route spans a length of 533 km, enabling high-speed trains to operate at speeds of up to 250 km per hour. The funding for this project, a EUR 554m loan, was also provided by China¹²⁴. Notably, this represented the first instance of a Chinese company undertaking a high-speed rail project outside its home country.

However, progress on the development of this route has been somewhat constrained, and China has shown limited enthusiasm for investing in it. According to interviews with state officials conducted by Ergenc and Gocer in 2023¹²⁵, Chinese officials have shown a preference for the Northern Corridor, despite its longer route. This preference is attributed to its cost-effectiveness and efficiency, mainly due to high-speed rail lines and simplified customs procedures (with only one border check in Russia, compared to multiple checks in the Middle Corridor). It is also reported that the discussions between Chinese and Turkish delegations have encountered several challenges. These include disagreements over interest rates for the possible loan; differences in the grace period before repayment begins; China's demand for final approval on rail lines and any additional components; China's insistence on using Chinese labour brought from China, rather than local Turkish labour, which Turkey favours; China's request for mortgage and the right to confiscate in case of repayment failure; and negotiations over the share of ownership, with China proposing a 51/49 split.

The last negotiations regarding the development of the line were conducted in 2019, and Turkey's final offer remains unanswered by China. Although Turkey faces financial constraints that prevent it from investing in its own railways, there have been recent developments. Specifically, the western section of the route, connecting Ispartakule and Cerkezkoy, was constructed with financial support from the EBRD and the Asian Infrastructure Investment Bank¹²⁶.

Benefits drawn from the investment

Although the Middle Corridor is not yet operating at full capacity, the construction of a high-speed railway between Edirne and Kars holds the potential to substantially reduce cargo travel times between Europe and China. Increased traffic in the Middle Corridor, as a substitute for the Northern Corridor, could play a pivotal role in fostering economic development in the region. Nonetheless,

¹²⁰ <https://www.forbes.com/sites/wadeshepard/2016/12/15/reconnecting-asia-the-story-behind-the-emerging-baku-tbilisi-kars-rail-line/?sh=444a54d23978>

¹²¹ <https://www.mei.edu/publications/chinas-belt-and-road-initiative-bri-and-turkeys-middle-corridor-win-win-cooperation>

¹²² <https://dergipark.org.tr/en/download/article-file/391676>

¹²³ <https://www.globalconstructionreview.com/turkeys-new-high-speed-rail-victory-erdogan0938346/>

¹²⁴ https://archive.nytimes.com/sinosphere.blogs.nytimes.com/2014/07/28/china-exports-high-speed-rail-technology-to-turkey/?_php=true&_type=blogs&_r=0

¹²⁵ <https://carnegieendowment.org/2023/05/05/china-s-response-to-t-rkiye-s-volatile-authoritarianism-pub-89690>

¹²⁶ <https://www.aiib.org/en/projects/details/2021/approved/Turkey-Ispartakule-Cerkezkoy-Rail-Project-Previously-Halkali-Cerkezkoy-Rail-Project.html>

the considerable increase in cargo volumes has brought to light significant bottlenecks, including prolonged travel times and increased transaction costs, underscoring the need for further investment in the route.

Increased investment in the route has the potential to eradicate bottlenecks while enhancing social, economic, and territorial cohesion across the region. However, for a more extensive regional development to become a reality, it is important that all countries within the region ensure open access to their networks for regional peers and participants. Additionally, countries should commit to investing in the enhancement of their domestic networks, aligning them with international corridors, and placing a priority on co-ordinated cross-border connections.

Risk assessment: Middle Corridor, Turkey

| | | | | | |
|---------------------|--|---|---|---------------|--------------------|
| Catastrophic | | | | | |
| Very serious | Hard security risk: Use of the terminal for military purposes | | | | |
| Serious | | Individual dependency risk: China invests in and acquires a significant ownership share of the Edirne-Kars High-Speed Railway | Coercion/influence risk: Soft-power influence through increased investment activity and lending | | |
| Substantial | Cybersecurity/data risk: Disruptions in national security due to cyber-attacks and espionage | | EU-level dependency risk: Deepened partnership between China and Turkey | | |
| Limited | | | | | |
| | Very unlikely | Unlikely | Somewhat likely | Likely | Very likely |

Source: Authors' analysis.

Individual dependency risk

Although the BRI provides Turkey with the opportunity to secure funding for significant construction projects, it also raises concerns about potential debt problems, often referred to as 'BRI debt-trap diplomacy'. Turkey's persistent economic challenges make external financial assistance crucial. However, as Turkey desperately seeks short-term economic solutions to alleviate current-account pressures, there is a risk of falling into a debt trap. Increased debt repayments to China could exacerbate macro-financial imbalances, posing further challenges for Turkey's economy.

Currently, exposure to Chinese ownership in Turkish infrastructure networks is quite limited. The most notable Chinese investment in Turkish transport infrastructure is the Kumpport Terminal located in Halkali, Istanbul. However, it appears that China has not fully harnessed the potential of the Kumpport Terminal, and the project has had a limited impact on the Turkish economy. The terminal is grappling with operational challenges and has been operating below capacity. Despite Turkey's interest, China has shown little enthusiasm for owning other ports or investing in additional transport infrastructure within the country.

However, should China re-engage and invest in the route, including the acquisition of operational rights for the Edirne-Kars rail line as negotiated, the ramifications could extend far beyond Turkey's borders. China's effective control of the Edirne-Kars line would translate to effective control of freight transport along the Middle Corridor. With the backdrop of Russian war of aggression against Ukraine, the Middle Corridor is poised to assume a more prominent role in managing railway cargo. If China

were to acquire ownership of the central route in Turkey, it could wield influence over Turkey's trade policies, potentially exacerbating challenges related to the trade deficit.

EU-level dependency risk

The EU endorsed the tentative expansion of the TEN-T to Turkey in 2013 and to the Eastern Partnership region, which includes Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine, in 2019. Enhancing infrastructure in Turkey not only fosters improved connectivity within the TEN-T for Turkey but also benefits the Eastern Neighbourhood. Although the initial motivation for integration appears to be driven by the rising Russian influence in the region¹²⁷, the potential investment, particularly in the Middle Corridor, has the potential to complement the BRI. Therefore, the critical challenge facing TEN-T is how projects will need to be adapted in light of the impacts of the BRI in order to avoid duplication.

Increased TEN-T investment in the region could potentially stimulate the growth in rail traffic associated with China. Consequently, this increased traffic could lead to a quicker utilisation of existing capacity. In the absence of adequate planning, this could result in congestion and the related costs of delays or rerouted traffic, especially if the majority of this traffic originates from China rather than the EU. Additionally, it may contribute to an amplification of Chinese influence in the region, to the disadvantage of the EU.

The region's connectivity landscape is complex, shaped not only by the Russian aggression against Ukraine but also by the Armenia-Azerbaijan conflict. Presently, neither the BRI nor the TEN-T provides Armenia with the means to enhance regional connectivity and overcome its isolation. Normalising Armenia's relations with Turkey and Azerbaijan is crucial for the EU to facilitate Armenia's access to infrastructure investment through TEN-T, preventing its exclusion from emerging strategic transport routes. Armenia's growing ties with the EU could sway Azerbaijan and Turkey toward stronger Chinese influence, especially if the conflict persists. The region is gradually dividing into two distinct blocs, and increased Chinese investment has the potential to cement these divisions.

Coercion/influence risk

As Turkey accumulates more debt to China through loan financing for infrastructure projects and experiences increased bilateral trade with China, historically marked by a significant trade deficit for Turkey, it creates opportunities for China to increase its influence over the country. This strengthens China's potential to establish a foothold in the region. By exerting control over the route, particularly if it gains control over the Edirne-Kars rail line China could significantly increase its influence, and this could have a particularly significant impact on the landlocked countries in the region, particularly on Armenia.

Cybersecurity/data risk

China's investment in Turkey's railway sector is primarily through construction contracts or loans without acquiring ownership. In addition, rail freight transport in Turkey comes under the aegis of TCDD Taşımacılık A.Ş. (TCDD Transport), a government-owned company. This means that the threat to cybersecurity, such as data breaches and economic espionage, is very low. Furthermore, Turkey has been making substantial progress in the field of cybersecurity, as evidenced by its high score in the Global Cybersecurity Index¹²⁸. This progress enables the implementation of robust mitigation policies, effectively minimising cybersecurity risks associated with FDI in the railway sector.

¹²⁷ <https://www.swp-berlin.org/10.18449/2023RP09/>

¹²⁸ <https://www.insightturkey.com/articles/turkiye-in-the-global-cybersecurity-arena-strategies-in-theory-and-practice>

Hard security risk

China's expanding presence in Turkey and Turkey's willingness to engage with China economically have shown only limited indications of leading to military co-operation between the two nations. Despite their strong economic ties, Turkey and China have not always seen eye to eye on political and security matters, particularly concerning China's treatment of Uighur Turks¹²⁹ and China's criticism of Turkish military operations in Syria against Kurdish-led forces¹³⁰. Consequently, it appears highly unlikely that these two nations will develop robust military ties that could pose a risk to regional stability.

¹²⁹ <https://www.theguardian.com/world/2019/feb/10/chinas-treatment-of-uighurs-is-embarrassment-for-humanity-says-turkey>

¹³⁰ <https://www.scmp.com/news/china/diplomacy/article/3033936/turkey-hits-back-chinas-call-stop-military-action-syria>

3. CONCLUSIONS AND POLICY RECOMMENDATIONS

This study complements the previous report for the TRAN Committee of the European Parliament, Chinese Investments in European Maritime Infrastructure¹³¹, and examines Chinese investments in the intermodal transport infrastructure. Although maritime routes have traditionally been a major mode of transportation of China's exports to the EU, other modes have been increasing in importance. It highlights the need for a holistic understanding of the opportunities and risks of Chinese investment in European transportation infrastructure, particularly concerning the EU as a whole and the EU Neighbourhood.

Arguably, the benefits have been high in the case of investment in several countries, such as Greece and Serbia, contributing meaningfully to local development, employment, tax revenue, etc. Nonetheless, at the EU level, the benefits are often less clear. Opportunities can arise if new connectivity routes decrease the costs of transportation, especially with increased rail services, which may allow shippers and their logistics providers to switch a part of their freight to rail. However, if the investments do not unlock real and new demand for imports and exports, the end result, similar to the situation regarding maritime ports, might simply be to redirect existing demand from other transportation routes, without any positive net impact for the EU as a whole.

Potential challenges may arise if new traffic induced by Belt and Road Initiative's (BRI) investments results in bottlenecks and capacity constraints. In addition, China's BRI can be used as an instrument to gain geopolitical influence in the EU and the EU Neighbourhood. The lack of conditionality for Chinese investments makes them more attractive than EU projects and can diminish EU's influence in the countries actively participating in the BRI (such as Serbia or Hungary). Threats of coercion over the flow of trade between different European hubs could harm TEN-T projects along those logistics networks.

When analysing the effects of the BRI, it is important to consider the fact that most of the Chinese infrastructure construction projects in the non-EU member countries are financed by loans, and the total value of such deals tends to be multiple times higher than the value of FDI projects, adding up to a significant proportion of GDP in some countries, especially in the Western Balkans. Loan financing for infrastructure projects creates opportunities for China to increase its influence over the individual countries and the region as a whole.

Additionally, as the case study on Greece shows, Chinese companies may not invest in the EU's TEN-T core network, but if they provide services along the lines, they can still influence significant trade flows in the region. Much as in the case of direct investments, that depends on the size of the presence of the Chinese provider.

Influence risks are the most likely to materialise (as has already been the case in many ways), with an additional area of concern being threats of coercion over the flow of trade between different European hubs, which could harm TEN-T projects along those logistics networks.

Risks from Chinese investment are apparent once certain thresholds of ownership levels are surpassed, specifically in terms of having influence and in terms of cyber/data risks if Chinese firms can access IT systems and local networks. That presents a risk at the local level, but could also bring broader risks for Europe, especially in relation to Member States' militaries and to NATO.

However, none of this means that Chinese investment in European transport infrastructure represents unmitigable risks and must therefore be excluded from the common market. On the contrary, many of the risks can be mitigated with better monitoring and regulation and better co-ordination between the

¹³¹ [https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU\(2023\)747278](https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)747278)

EU and Member States. However, the current regimes to manage such risks at the EU and national level are insufficient for the challenges at hand and need to be reformed.

Finally, while this study provides a broad risk assessment framework, it has also revealed areas in need of further study – particularly on measuring and managing cyber and data risks in greater detail, as well as in developing and applying quantitative models to measure more precisely the impact that these investments have on trade flows in terms of changes in volumes, as well as changes in the share of trade with specific partners.

Policy recommendations

Increase understanding and knowledge:

- The EU should carry out an **in-depth study on Chinese companies' involvement in management software and other software along the TEN-T core network**. The study should include a risk assessment of cyber/data risk relating to the use of Chinese software.
- All 27 Member States should commission **national studies to assess the presence of Chinese companies in the TEN-T core network** within their borders and the risk of such presence.

Strengthen European response within the EU:

- Encourage Member States to officially recognise the **infrastructure along the TEN-T core network** as **critical infrastructure**.
- Propose the creation of an **EU framework to safeguard the security of EU transport infrastructure** that takes into consideration not only the risks that emerge from investments into the infrastructure network, but also the **service providers**.
- Propose guidelines to **ensure that no cargo can travel unchecked within the EU** if the shipping company and the intermodal operators all belong to the same non-EU country and/or the same non-EU company.
- Strengthen the **EU oversight over non-EU investments** in transport infrastructure that is part of the **TEN-T core network**.
- Encourage Member States to carry out **data collection and risk assessment of the infrastructure that are part of the core TEN-T** present within their borders.
- Strengthen **national and EU screening mechanisms** to pay more attention to subsidies of Chinese enterprises and the operations they carry out within the EU.

Strengthen EU response with neighbouring countries:

- Encourage adoption of **FDI screening in neighbouring countries that are part of the TEN-T network** and co-ordination of the application of the screening with neighbouring countries.
- Link the adoption of **FDI screening and the recognition of the related transport infrastructures as critical infrastructures**.
- Encourage countries to ensure **greater transparency of Chinese projects in their transport infrastructure** and undertake a more thorough **debt sustainability analysis in relation to BRI infrastructure projects**.
- Fund more **investment in transport infrastructure** in the region, **particularly in candidate and potential candidate countries**. The amounts required to make a sizeable difference in its

neighbouring countries are small relative to the overall EU budget¹³². Financing can take various forms, such as direct budget support, but also instruments to reduce risk and the cost of financing as well as public/private partnerships involving EU firms.

- Combine this offer of expanded support with **tougher conditionality regarding FDI screening**, greater transparency of investment agreements, as well as labour protection, environmental and other standards.

¹³² <https://wiiw.ac.at/keeping-friends-closer-why-the-eu-should-address-new-geoeconomic-realities-and-get-its-neighbours-back-in-the-fold-p-6487.html>

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ANNEX

Table 3: Value of Chinese acquisitions in non-maritime transport infrastructure of the EU and its Neighbourhood

| | Investor | Value, EUR m | Share size | Transaction party | Sector | Country | Source |
|------|---------------------------|--------------|------------|---|----------|------------|---|
| 2007 | LinkGlobal Logistics | 111 | n/a | Parchim Airport | Aviation | Germany | ECFR China-EU Power Audit Key Deals 2005-2017 |
| 2012 | Hainan Airlines Group* | 31 | 48% | Aigle Azur Transports Aeriens SAS | Aviation | France | https://www.avionews.com/en/ite m/1146654-aircraft-and-finance-hna-group-acquires-a-48-stake-in-aigle-azur.html |
| 2013 | Henan Civil Aviation | 189 | 35% | Cargolux Airlines | Aviation | Luxembourg | ECFR China-EU Power Audit Key Deals 2005-2017 |
| 2014 | Shandong Hi-Speed | 163 | 25% | Friedmann Pacific Asset Management | Aviation | France | ECFR China-EU Power Audit Key Deals 2005-2017 |
| | Fosun | 171 | n/a | Latsis | Aviation | Greece | ECFR China-EU Power Audit Key Deals 2005-2017 |
| 2015 | China Minsheng Investment | 111 | 34% | LuxAviation | Aviation | Luxembourg | ECFR China-EU Power Audit Key Deals 2005-2017 |
| | Casil* | 300 | 49% | ATB | Aviation | France | ECFR China-EU Power Audit Key Deals 2005-2017 |
| | Hainan Airlines Group* | 4,431 | 100% | Avolon | Aviation | Ireland | ECFR China-EU Power Audit Key Deals 2005-2017 |
| | CEFC | n/a | 10% | Travel Services | Aviation | Czechia | ECFR China-EU Power Audit Key Deals 2005-2017 |
| 2016 | Hainan Airlines Group* | 1,028 | n/a | Avolon | Aviation | Ireland | C ECFR China-EU Power Audit Key Deals 2005-2017 |
| | Hainan Airlines Group* | 15 | 83% | Flughafen Hahn | Aviation | Germany | https://hahn.fluglaerm.de/oeffent/zeitungsartikel_2017/rz080817_wa hrer_kaufpreis_hna.pdf |
| | Ocean Rail Logistics S.A. | n/a | 15% | Budapest Intermodal Logistics Centre (BILK) | Rail | Hungary | https://rch.railcargo.com/en/news/rail-cargo-terminal-bilk-ocean-rail-logistics-agreement |
| 2020 | Ocean Rail Logistics S.A. | n/a | 60% | Piraeus Europe Asia Rail Logistics Ltd | Rail | Greece | https://cms.law/en/deu/news-information/international-cms-team-advises-chinese-container-logistics-giant-cosco-on-acquisition-of-greek-pearl-group |
| 2021 | China Eastern | 168 | 10% | Air France-KLM | Aviation | France | https://www.reuters.com/business/aerospace-defense/air-france-klm-seeks-about-1-bln-euros-via-share-issue-2021-04-12/ |

* Casil sold its stake in Toulouse-Blagnac Airport in 2019; Hainan Airlines Group sold its stakes in the airports it owned, owing to insolvency.

Table 4: Pledged capital in announced greenfield investment projects in the maritime sector infrastructure of the EU and its Neighbourhood; EUR m

| Project date | Parent company | Destination country | Sector | Capital investment | Jobs created |
|---------------------|--|----------------------------|-------------------------------|---------------------------|---------------------|
| Sep 2014 | Hainan Airlines Group* | France | Air transportation | 2.4 | 15 |
| Jun 2017 | Hainan Airlines Group* | Belgium | Air transportation | 33.8 | 100 |
| Jul 2017 | China Eastern Airlines | France | Freight/distribution services | 2.9 | 10 |
| Dec 2017 | COSCO | Greece | Freight (rail transportation) | n/a | n/a |
| May 2020 | Henan Bonded Logistics Group | Belgium | Air transportation | 0.8 | 13 |
| Sep 2020 | Hongyuan Group | Belgium | Freight/distribution services | 3.0 | 30 |
| Nov 2020 | Tolead Group | Belgium | Air transportation | 0.1 | 3 |
| Mar 2021 | Jiangsu Judphone International Logistics | Germany | Freight/distribution services | 0.2 | 5 |
| May 2021 | China Central Longhao Airlines | Belgium | Air transportation | 0.7 | 2 |
| May 2021 | Zongteng Group | Germany | Freight/distribution services | 45.6 | 77 |
| Oct 2021 | Zongteng Group | France | Freight/distribution services | 10.0 | 25 |
| Nov 2021 | Shenzhen Baosen Suntop Logistics | Germany | Freight/distribution services | 45.6 | 77 |

Source: fDi Markets, <https://oevz.com/en/oceanrail-logistics-s-a-greece-officially-established/> ; authors' calculations.

*Hainan Airlines Group sold its stakes in the airports it owned, owing to insolvency.

This study looks at Chinese investments in non-maritime transport infrastructure in the EU and EU Neighbourhood through the lens of 'de-risking' for the first time. It provides a comprehensive overview of Chinese investments in the European non-maritime transport infrastructure over the past two decades and weighs the associated risks. The study borrows the framework adopted by the *National Risk Assessment of the Kingdom of the Netherlands 2022* for its risk assessment and further develops it to score the impact and likelihood of the investments across five major threat areas: EU-level dependency risk, individual dependency risk, coercion/influence risk, cybersecurity/data risk and hard security risk. The analysis illustrates that the risks remain insufficiently understood by Member States, despite their high likelihood and/or impact. This is particularly true for economic coercion and cybersecurity/data risks.
