Who Rules the Waves in the 21st Century?

The International Political Economy of Global Shipping

Jensen, Federico

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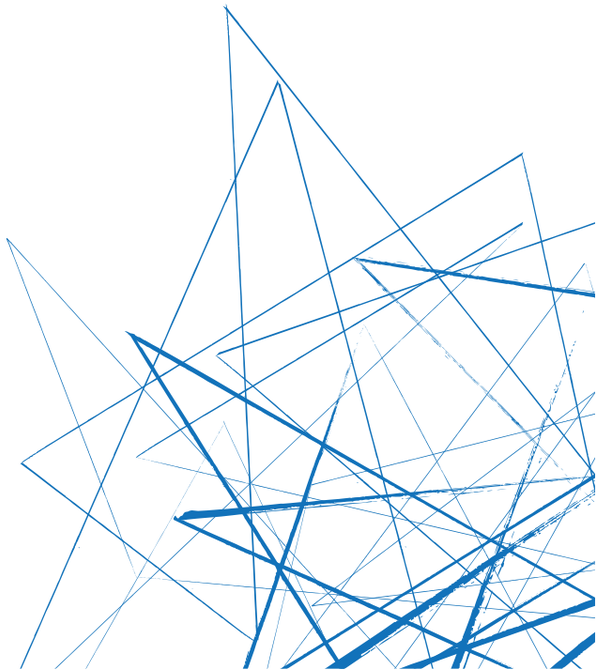

WHO RULES THE WAVES IN THE 21ST CENTURY?

PhD Series 32.2023

Federico Jensen

WHO RULES THE WAVES IN THE 21ST CENTURY?

THE INTERNATIONAL POLITICAL ECONOMY OF GLOBAL SHIPPING

Department of Organization | **PhD Series 32.2023**

CBS COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN

Who rules the waves in the 21st century?

The international political economy of global shipping.

Federico Jensen

Supervisors: Duncan Wigan & Henrik Sornn-Friese

CBS PhD School

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Abstract

As geoeconomic competition intensifies, trade and investment relations between China and other industrialized nations have been put into question. As the key infrastructure of trade, shipping is a source of economic and political power in the global economy. Shipping is key for economic development and the facilitation of economic globalization. Shipping and naval superiority also play a role in power projections by states in the international arena. This is complicated by the fact that shipping services are a market with an ill-defined jurisdictional paradigm, its own dynamics of wealth creation, peculiar firm competition, and its own crisis tendencies. Global political conflicts have reflected on to the shipping industry on several occasions, closures in the Suez Canal or strikes in ports represent instances of the interrelation between political economy and shipping markets.

This dissertation contributes to the literature on the economic and political consequences of global investments in infrastructures by exploring complex state-capital relationships in the global shipping and logistics industries. Following the shipping industry makes it clear the ways in which capital accumulation (and crisis thereof) in transport markets affect the international political economy and vice-versa. Empirically, this dissertation studies the underlying socio-economic processes of the China challenge to 'the freedom of the seas' shipping regime upheld by American naval superiority post WWII. In doing so, this dissertation demonstrates the domestic political economy reasons for the expansion of transportation infrastructures and logistics markets within and outside China as a state strategy to rebalance the Chinese economy. The dissertation then showcases the effects Chinese policy has in other countries, both economically and politically, through the study of investments within the Maritime Silk Road initiative in Europe and the synergies between Chinese and European states' strategies for logistics development. Finally, the dissertation explores the geoeconomic consequences of Chinese expansion in global shipping markets, which has led states recalibrate geoeconomic calculations in the global economy.

Resumé

Den skærpede globale geoøkonomiske konkurrence har sat handels- og investeringsforhold mellem Kina og andre industrialiserede lande under pres. Som en af de vigtigste handelsinfrastrukturer, er skibsfart en kilde til økonomisk og politisk magt i den globale økonomi. Skibsfart er nøglen til økonomisk udvikling og facilitering af økonomisk globalisering. Statslige aktører bruger skibsfart som et magtfuldt værktøj i den internationale arena. Samtidig, er shippingtjenester et markede med et dårligt defineret juridisk system, sin egen dynamik i kapitalophobning, usædvanlige konkurrenceforhold og sine egne krisetendenser. Globale politiske konflikter reflekteres ved flere lejligheder, som relaterer sig til skibsfarrtsindustrien. Lukninger i Suez-kanalen eller strejker i havne er eksempler på sammenhængen mellem politisk økonomi og skibsfartsmarkeder.

Denne afhandling bidrager til litteraturen om de økonomiske og politiske konsekvenser af globale investeringer i infrastruktur ved at udforske komplekse relationer mellem stat og kapital i skibsfartsindustrien. At følge shippingindustrien gør det klart, hvordan kapitalakkumulation og krisen heraf på transportmarkederne påvirker global politik og omvendt. På empirisk plan udforsker denne afhandling primært de underliggende socioøkonomiske processer i hvordan Kinas udfordrer den liberale verdensorden på skibsfartsområdet, som blev opretholdt af amerikansk flådeoverlegenhed efter Anden Verdenskrig. Derved udforsker denne afhandling de interne politiske-økonomiske årsager til udvidelser af transportinfrastrukturer og logistikmarkeder i og uden for Kina som en statsstrategi til at genoprette balancen i den kinesiske økonomi. Afhandlingen viser derefter de effekter, kinesisk politik har i andre lande, både økonomisk og politisk, gennem undersøgelsen af investeringer inden for Maritime Silk Road-initiativet i Europa og synergierne mellem kinesiske og europæiske staters strategier for logistikudvikling. Endelig udforsker afhandlingen de geoøkonomiske konsekvenser af kinesisk ekspansion på globale shippingmarkeder, som rekalibrerer staters geoøkonomiske valg i den globale økonomi.

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There are many people to thank for the completion of this dissertation. I want to thank my primary PhD supervisor Professor MSO Duncan Wigan, for supporting and encouraging me to have my own voice and research identity, while providing insightful comments, suggestions, constructive criticism and loads of editing assistance all the way. I also want to thank him for the nice lunches at his place in Vesterbro to discuss the project. I am also grateful to my secondary supervisor Associate Professor Henrik Sornn-Friese for providing contacts within the maritime research environment as well as directly with the shipping industry when possible and reading drafts of the articles comprising this dissertation. Of course, all errors in this dissertation remain my own and do not reflect supervising efforts throughout these three years.

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Table of Contents

List of Figures

List of Tables

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Part 1. Introduction, theoretical considerations, and the global shipping market.

This first part provides two chapters setting the stage for the empirical material and the arguments that the compilation of articles in part two provide. Chapter one introduces the topic of this study, the global shipping industry, the development of China as a maritime nation and the Belt and Road Initiative and problematizes the perceived challenge of China to the current shipping regime as the focus of this research. Chapter one then presents the research questions and the contributions this dissertation makes to the literature. Chapter one also discusses research design, methods and the empirical material used, in addition to other methodological considerations as well as limitations. Chapter two presents the theoretical framework that informs the overall dissertation, arguing that the return of the state in the shipping industry forces us to conceptualize new state-capital relations in the shipping industry amid shifting structures of global capital accumulation and geoeconomic competition.

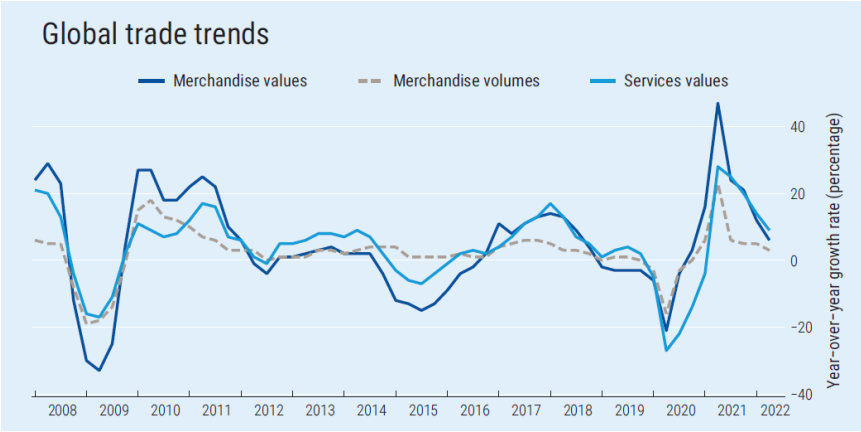
Chapter 1. Introduction, a new dominance of the state in shipping?

1.1. Global shipping regimes, the state, and hegemonic competition

As the basic infrastructural precondition of all trade, shipping and logistics amass considerable amounts of power in the global political economy. Although understood as a cheap commodity, maritime shipping is one of the most material economic processes in modern society (Levinson 2006). The rise of containerization in the 60's and the creation of larger shipping infrastructure have allowed for the continuous expansion of trade (Levinson 2006). At the same time, re-locations of production and trade have led to new constellations of economic actors who organize and govern trade lanes and global production (Gereffi, Humphrey and Sturgeon 2005; Gereffi 2014). However, frictions have arisen in the global shipping network. Shipping markets and globalized trade has stagnated in the last decade, with year over year growth in trade volumes (dash line) remaining around zero from 2010 to 2019 as shown in figure 1 below, after stabilizing from the financial crisis. During the Covid-19 crisis, we see first a dip in transport volumes and then a large uptick given the need to refurbish homes during covid lockdowns as spaces of work and entertainment. Now in 2023, with the current economic conditions of high inflation, trade volumes seem to be going down again[1].

[1] See: https://www.wto.org/english/news_e/pres22_e/pr909_e.htm

Figure. 1.1. Year-Over-Year global trade growth rate



Source: UNCTAD, retrieved from https://unctad.org/system/files/official-document/ditctab2023d1_en.pdf, Page 1.

At the same time, the increased economic importance of Asia in global trade has led to geopolitical contestations between a more assertive global China and other industrialized countries. The threat of a new cold war and economic de-coupling between China and the West have become salient. A particular focus has surrounded infrastructure, and among this shipping infrastructure, as one key space of China's assertiveness in the global order (Schindler et.al. 2021). The signature policy of the Belt and Road Initiative has been framed as a security and hegemony challenge to the US (Kardon and Leutert 2022; Liu et.al. 2020).

A key, if perhaps too unequivocal and binary, framing of this renewed geopolitical contestation is around the different approach to capitalism in China, as a state capitalist nation, lying outside the liberal international order (Alami and Dixon 2020a). This return of statism, through state capitalism, is most acute in debates about China, but it can be argued to be a more generalized trend among both developing and industrialized economies (Kurlantzick 2016; Alami and Dixon 2020b). The popularization of the term in academic and policy debates stems from the growth of capital being administered by states through sovereign wealth funds and the internationalization of state-owned enterprises (Cuervo-Cazurra et.al. 2014).

One key feature of 'new' state capitalism is that rather than the focus of the state being on exerting regulatory control over their own capitalist economies, state firms and state capital are integrated globally in transnational networks of global production, infrastructure, and ownership (Schindler et.al. 2022)[2]. For example, in the case of shipping, state owned enterprises (SoEs) can be considered global leaders in their sector, as will be discussed throughout this dissertation. To counteract the leadership of state capitalist firms in the global economy, states in the West have started to rethink their own market strategies and are seeking to aid their firms in this competition, primarily through different forms of industrial policy (Alami and Dixon 2021; Schindler et.al. 2022).

Particularly the shift of industrialized economies towards practicing industrial policy, has been discussed as a new wave of neo-mercantilism (Helleiner 2021) and techno-nationalism, in the context of trade and geopolitical tensions surrounding China and the US (Weiss and Thurbon 2020). A core aspect of this new wave of neo-mercantilism has been infrastructure. Large investments in infrastructural connectivity, logistics networks and further integration into global production networks have become avenues for neo-mercantilist competition (Schindler et.al. 2022; Schindler and Kanai 2021; Nem Singh and Chen 2018). This highlights the importance of understanding the role of shipping and transport in this new wave of statism in the global economy and its geopolitical consequences.

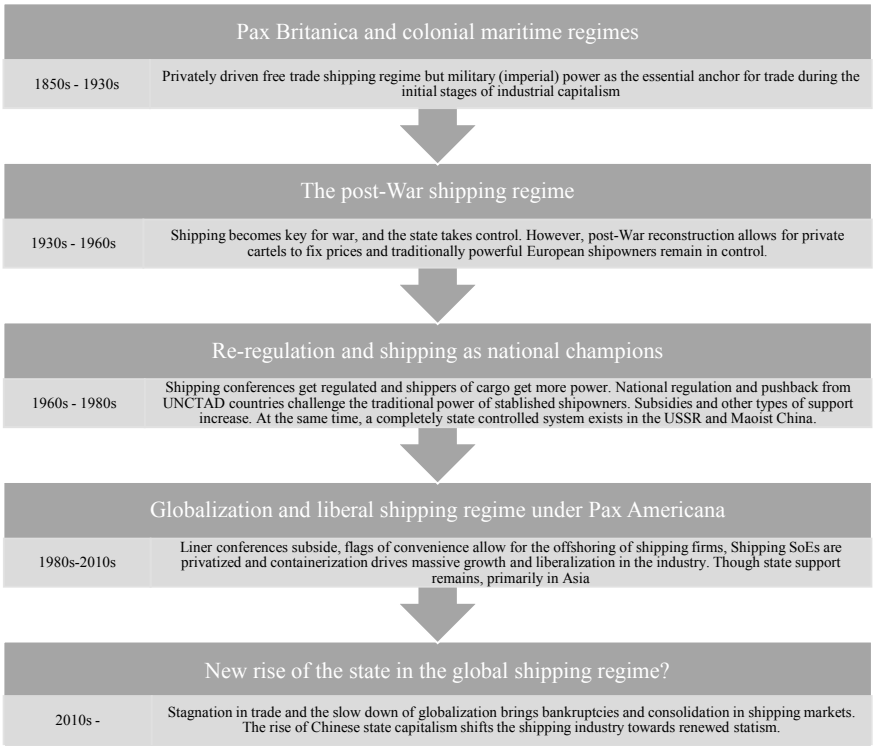
To understand the role of the state within the shipping industry and the broader implications for hegemonic competition, this dissertation employs the concept of international shipping regimes as an overall framing for state competition (Cafruny 1987). The concept of regime is used by Cafruny to encompass the ways in which states intervene in markets and combine expectations and principles on which actors in a regime converge (Cafruny 1987: 13-14). Until the rise of containerization and globalized trade in the 1980s, all commercial activities within shipping were seen as political and the importance of the sector for geopolitics was a salient topic in political economy (Strange 1976). Indeed, we can see how, throughout history, "the

[2] The addition of 'new' to the idea of state capitalism stems from a desire by the proponents of a renewed discussion of state capitalism to distinguish between historical discussions of state capitalism (see Sperber 2019 for an overview) and to highlight the transnational nature of state influence in the economy (Alami and Dixon 2020a). Of course, much can be argued about the over-emphasis in debates in political economy on the state withering away up until the global financial crisis vis a vis the persistence of state intervention, particularly in Asia, throughout the same period (Gabusi 2017; Wade 2018).

leading power in the international political economy has tried to construct an international shipping regime to support its bid for global hegemony" (Cafruny 1987:272). The importance of the means of commerce (i.e., shipping) for global competitiveness was also intellectually ingrained in the debates of neo-mercantilists inspired by the writings of Friedrich List and Alexander Hamilton (Helleiner 2021). One such instance of regime change as a bid for economic hegemony was the navigation acts during the mercantilist era, which aided the British in replacing the Dutch as the maritime hegemon (Campling and Colás 2021) and were only fully repealed in the 1850s when British competitiveness through the industrial revolution was completely secured. Similar protectionist policies were enacted in the independent United States to foster their own shipping industry to carry exports (Helleiner 2021: 36-45).

Figure 1.2. below, provides a timeline of the different international shipping regimes since the 1850s until the current newfound statism in shipping. At the same time, the international shipping regime must always be understood as partial and incoherent (Cafruny 1987: 273). For example, even as this study explores the growth of statism in the shipping industry, one cannot obviate that the leadership of the shipping industry remains with European, privately owned, family-based firms which continue to wield considerable power in international shipping. Furthermore, as state owned firms from Asia are internationalizing, port authorities and terminal operators elsewhere, particularly in Europe, are privatizing. And while the state is back in the building and operation of connectivity infrastructures in the global south (Schindler et.al. 2021), some scholars have argued that further growth of private influence is unfolding in the ways in which states plan and perform infrastructure development projects (Gabor 2021).

Figure 1.2. The historical evolution of global shipping regimes



Source: Made by the Author based on Campling and Colás 2021; Stopford 2009 and Cafruny 1987.

As figure 1.2 above shows, prior to WWI and WWII, trade was comprised of a predominantly private system, with low volumes of high value goods being transported long distances. This system was underpinned by colonial and imperial forms of capital accumulation (Campling and Colás 2021). During WWI, the primacy of sea power becomes key in the theater of war, and states nationalize shipping firms or seize their assets for the purposes of war. This system endured through the interwar period and until after WWII. The requirements for reconstruction after WWII also spurred shipping demand, while the growth of the industry led to a new liberalization drive as states attempted to revive their private economies after years of state planning in war economies.

In this liberalization drive after WWII, especially European shipowners were able to shape global shipping markets for general cargoes, as the US was more interested in maintaining control of standards and policies in bulk and tanker cargo transportation (oil and other key strategic minerals and coal). The modern shipping industry tends to be divided into four categories: bulk shipping, tanker shipping, liner shipping (container shipping) and specialized shipping. Bulk and tanker shipping carry raw materials in large quantities between ports on an on-demand basis, while liner shipping, transporting general dry cargo in smaller volumes, tends to run between predetermined key ports on fixed schedules (Stopford 2009)[3]. For European economies, post WWII maritime and transport industries represented a large part of their economies in comparison to the US which was then manufacturing powerhouse. This meant that liner shipping, as envisioned primarily by European shipowners, created a system of price fixing conferences and controlled competition in the main transportation markets and prevented the rise of new competitors (Cafruny 1987).

The 1960s witnessed the beginning of the end of liner conferences and the transformation of the industry from a nationally oriented transportation system to the new world of globalized transport. This was driven in part by stronger regulations that attempted to protect shippers from monopolistic pricing practices from shipping lines, leading to more competition among shipping firms. The change was also driven by a strong movement by developing countries, led by the United Nations Conference on Trade and Development (UNCTAD) which felt sidelined by the conference system. Elevated prices, they argued, denied them the opportunity to develop, and resulted in a code of conduct for liner shipping conferences (UNCTAD 1974). Liner conferences provided power to set the terms of trade between economies. Thus, during the post-colonial era, more and more states through UNCTAD demanded a rebalancing of power in the global shipping regime. Changes to the conferences occurred to accommodate UNCTAD interests, though developing countries still felt discriminated against and incurred higher prices for their trade (Cafruny 1987).

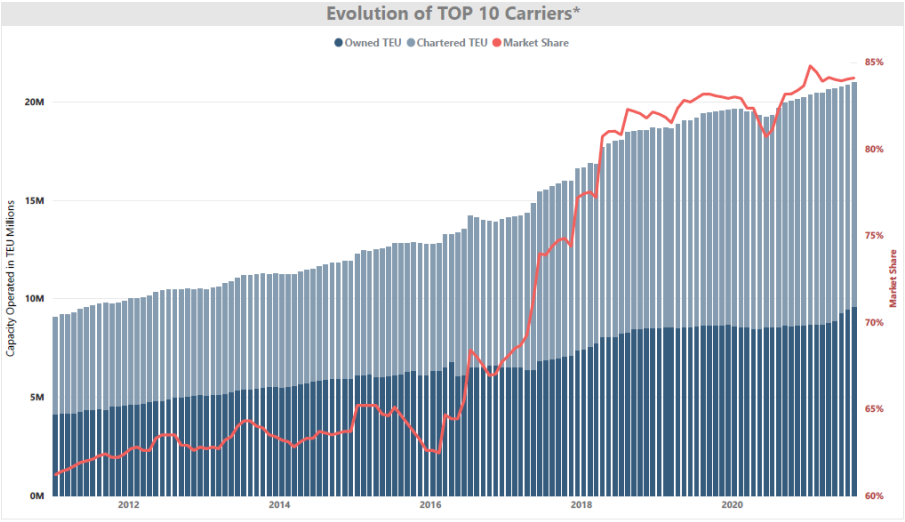
The oil shock and the economic slump in the 70s provided for the beginning of a liberalization drive in both Europe and the US. This planted the seeds for a global economic shift and the creation of globe spanning supply chains. This was aided by

[3] This dissertation focuses primarily on liner shipping, although China is a relevant actor across all segments of shipping.

innovations in liner shipping, where containerization was taking off, vastly reducing the time and costs it took to transport goods across distances, inciting a logistics revolution (Levinson 2006; Cowen 2014). Global supply chains, with Asia at the center of the outsourcing of manufacturing, opened opportunities for the development of new actors in the maritime industry stemming from Asia, primarily Japan, South Korea and Taiwan, and later China (Chida and Davies 1990; Amsden 1992; Lee et.al. 2002).

Since the 1990s, the growth of the system of flags of convenience and the end of the conference systems provided for massive privatization and the global expansion of shipping firms (Frémont 2007). Under neoliberal globalization, the last state-owned shipping firms in Europe were privatized through mergers with private shipowners, while other national lines struggled to capture cargoes from the ever-larger global providers, who could leverage their expanding networks for price competitiveness.

Figure 1.3. Top 10 Container Carriers Market Share



Source: Alphaliner Monthly Monitor, August 2021. The top Ten Carriers are, in order of TEU capacity: MSC (Switzerland), Mærsk (Denmark), CMA CGM (France), COSCO (China), Hapag Lloyd (Germany), Evergreen (Taiwan), ONE (Japan), HMM (South Korea), Yang Ming (Taiwan) and ZIM (Israel).

This trend of consolidation has continued to the point where the top 10 container lines control between 80% to 85% of all container capacity (see figure 1.3 above). This is chiefly achieved through acquisitions and mergers, but also through alliances between shipping firms to share cargo space (Haralambides 2019; 2017). The shipping industry has been touted as one the most competitive global industries, reflecting ideas of 'perfect market competition', given its global reach and its intense business cycles (Stopford 2009). However, this is far from the case. Rather, years of consolidation have led to an oligopolistic market structure, with some smaller trades where there are less transport volumes being completely monopolized (Greve 2022; Sys 2009). Few shipping companies are truly global, and most specialize in specific geographical regions and specialized transport markets given the capital and asset requirements of being global (Greve 2022; Frémont 2007). This has led to a situation where the top 10 shipping lines amass considerable power in relation to other actors in the maritime logistics system. Particularly ports must negotiate with and attract shipping lines to maintain cargo volumes.

Apart from consolidation in shipping markets, shipping firms have shifted to becoming integrators of transportation services at sea and through air, road, and train freight, essentially transforming into fully fledged logistics firms. This transformation has been borne out of the difficulties of further consolidation in the shipping industry and the increased requirements from shippers regarding the visibility and security of cargoes. Although not all shipping lines are moving in this direction, an attempt to provide full logistics services to clients is a trend among most truly global firms (MSC, Mærsk, CMA CGM and COSCO). This changes the balance of power in logistics industries, as shippers, rather than diversifying transport services between many firms, may focus on one door-to-door provider; at least that is the hope of shipping lines in a search for stability in an otherwise volatile market environment with few long-term contracts (Paridaens and Notteboom 2022). For instance, the recent move by Vestas, a Danish windmill manufacturer, to have all their containerized transport services provided by Mærsk, represents a shift in supply change strategies from global firms[4].

In arguing for increased attention to shipping and logistics from the lens of political economy, my project contends, much like Cafruny on shipping regimes discussed above, states still vie for hegemonic control over the sea. At the time of Cafruny's

[4] See https://www.maersk.com/news/articles/2021/11/10/strategic-partnership-with-vestas-on-all-containerized-transport

work, this control over the waves was conceived under a strong nation-state framework understanding of international political economy. However, the role of the state has been re-shaped by the globalization of production and growing interdependence between states. Hegemony of the waves in the 21st century is just as important as it was in the 20th century. However, the question remains as to how the political economic strategies to assert control over the sea have changed in line with changes in global processes of capital accumulation. As the state is again in focus in academic debates about economic governance, what are the new features of the state's relation to capital? How does the state navigate a more interconnected global economy in aiding the competitiveness of its firms? How does the new wave of statism affect hegemonic competition and world order? These are the broad questions this study attempts to respond to within the realm of shipping markets.

This dissertation contends that if one understands the growth of China as a hegemonic challenge to the US, the way in which Chinese state capitalism is transforming the current international shipping regime is relevant for international political economy as a way to gain traction on the changes we are observing in globalized trade and geoeconomic relations. As such, this dissertation attempts to unpack and understand global shipping markets, Chinese maritime shipping policy and maritime aspects of the Belt and Road Initiative. The next two sections provide a description of China's rise as a maritime nation (section 1.1.1) culminating in the Belt and Road Initiative as an effort to internationalize the Chinese political economy (section 1.1.2).

1.1.1. China's rise as a modern maritime state

As a strategic industry, the maritime sector is heavily controlled in China (Yang et al. 2019, 101). In the first five-year plan after the communist revolution (1953-1957), all ports came under state ownership. 38 major ports of the country were centrally managed and controlled by the ministry of communications (Yang et al. 2019, 101). Most shipping and shipbuilding practices in China had been lost during the Ming and Qing dynasties as well as the first Chinese republic (Heine 1989). Furthermore, most ships escaped to Taiwan or were destroyed after the communists came to power (Heine 1989). Before the reform period, China was not integrated into the global economy. The State Planning Commission controlled all imports and exports flows, and almost all trading occurred through firms controlled by the Ministry of Foreign Trade (Aritua et.al. 2022). In the port sector, ownership and governance was managed directly by the Ministry of Transport (MoT), all revenues

were taken directly by the central government and provincial government had no say on port development or operations. Despite these initial conditions after World War II, China became a major maritime actor by the 1990s and continues to grow. For example, 7 out of the 10 busiest global container ports are in China[5].

The development of China as a shipping giant began with the development of its coastal ports. Four periods of policy approaches to port development can be identified, as set out in table 1.1 below:

Table 1.1. Chinese Port Development 1978 - Present

Policy Area	1978-1991	1992-2001	2002-2011	2012-Present
Key event	Official reform and opening of China's planned economy system.	Formal establishment of China's socialist market economic system.	China joins the WTO.	Structural shift of China's economy from export led to domestic demand.
Macroeconomic development approach	Reform and opening of China's planned economy, enabling private and corporate wealth creation; open-door policy aimed at trade growth.	Export-led economic development of China's socialist market economic system.	Expansion of international trade following accession to the WTO; reduced regional economic disparities and large economic stimulus.	Focus on sustainable development and growth, in large part based on growing domestic demand. Goal of innovation-driven economic growth.
Regional economic development	Development of the first four SEZs along the coast. Special status for 14 port cities as "coastal open cities"	Investments in infrastructure and special economic zones as engines of growth. Additional development of SEZ in inland region.	Implementation of Go West Policy to develop China's interior provinces, among others, through large-scale investments in infrastructures and inland logistics hubs.	Development of the BRI, with additional focus on rail routes across Asia and Europe.
Port governance and reform	Steps toward decentralization and commercialization of port development, previously under sole control of central government. Freedom for cargo owners to build port facilities. Policy to allow foreign entry in terminal operations under strict conditions.	Continuation of decentralization and commercialization. Separation of administrative functions in public agencies and commercial port enterprises. Tests of public-private initiatives via joint ventures.	Complete transfer of port development to local government (2004 Port law). Relaxation of conditions for foreign entry, mainly by allowing operators to independently set prices.	Formation of provincial port groups to prevent excessive competition among local port enterprises, with associated risks of overcapacity. Investments by port companies in inland port networks encouraged by central government.

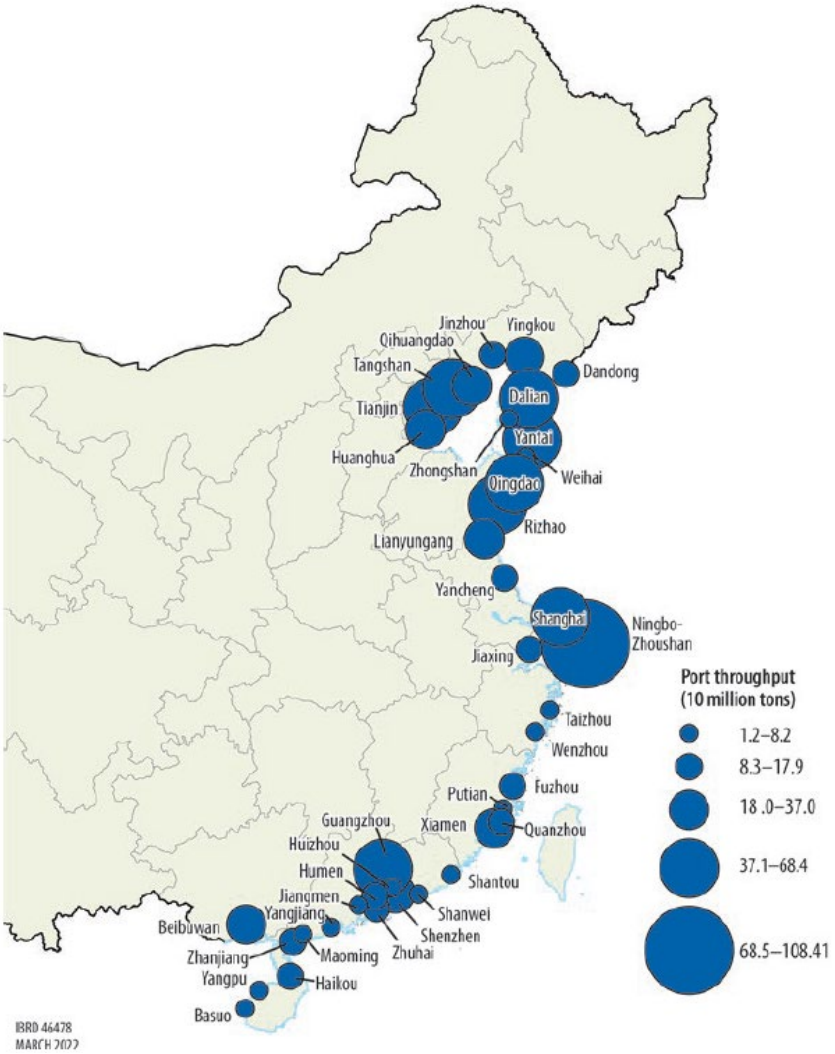
Source: Adapted by the author from Aritua et.al. 2022: 20-21.

[5] See Lloyd's list ranking of top 100 ports of 2022 https://lloydslist.maritimeintelligence.informa.com/one-hundred-container-ports-2022

The first period from 1978 is the beginning of the reform and opening period and runs to 1991. Chinese economic reforms parallel the fall of costs in maritime transport resulting from containerization, the development of ICT infrastructures and the resulting increases in ship size (Aritua et.al. 2022; Levinson 2006). The initial reforms related to shipping infrastructure were focused on the decentralization of port management to aid the formation of special economic zones (SEZs), as each of the initial SEZs were in the vicinity of a coastal port. Decentralization took the form of a dual-management system, bringing municipal governments back into playing a role in port development (Aritua et.al. 2022). Provincial and city authorities provided land and tax advantages, inciting intra-regional competition, while foreign firms and cargo owners operated and built facilities around ports under tight restrictions.

Building on this initial experience and after Deng Xiaoping's Southern Tour in 1992, economic and governance reforms accelerated, including in seaports. From 1992 until 2001, new decentralization initiatives were undertaken surrounding ports, allowing local governments to independently use their own fiscal resources, so they could invest directly in port development in their city/region (Aritua et.al. 2022). This incited some local governments to innovate in terms of investment financing and human capital reforms, creating incentive-based remuneration for all workers in ports and providing operational efficiencies (Cullinane and Wang 2006; Lee et.al. 2002). In this period the most successful cities incentivizing these reforms were in the south; Guandong province and the city of Shenzhen, and in the center region, with Shanghai experiencing a major economic revival (see figure 1.4 below). However, port development, and the Chinese shipping industry more generally, could not keep up with the growth in Chinese trade (Heine 1989). A new wave of reforms started as port development received renewed attention and moved up the policy agenda. Port development featured in successive five-year plans since then (Aritua et.al. 2022).

Figure 1.4. China's Coastal Ports



Source: Aritua et.al. 2022: 4.

Joining the WTO ignited a new wave of shipping reforms that lasted from 2002 to 2011. The boost in trade after joining the WTO demanded a similar boost in port capacity. As such, the Port Law of 2004 decentralized port governance further and

limited government intervention by splitting port governance into regulatory and commercial activities[6]. This motivated further operational innovation and boosted competitiveness. It also motivated the link by the commercial arms of port authorities with foreign firms that were leaders in the port sector (Aritua et.al. 2022). Corporations like Hutchinson Whampoa, PSA and Mærsk grew their presence in China, also bringing equipment, managerial and operational skills and even clients, while also putting pressure for further reform[7]. In addition, inland investments in the hinterland become more widespread as the Chinese government launched the Go West Policy, which expanded the overall transportation system in China benefitting ports and further boosting port growth.

These types of joint ventures are not just good in terms of providing necessary financing, but also in introducing technology and operational know how into local economies. Foreign firms received many benefits from these joint ventures, such as leasing lengths above 30 years, exemptions from customs and tax duties while the

[6] This started with a notice in 2001 by MoT "improve the separation of public and private sectors and promote administrative efficiency" (Ministry of Transport 2001 in Aritua et.al. 2022), pushing for reform. However, by 2003, only 11 of 38 main coastal ports had completed the separation of regulator and commercial activities. Then, in March 2003, the MoT issued a mandate for the acceleration of the process of separating administrative and commercial units (Aritua et.al. 2022), showcasing the intricacies of Chinese governance, and how the central government first allows for the initiative of provinces while then mandating action when provinces drag their feet.

[7] Although the initial strategy of maritime development in China strived for self-sufficiency the rapid industrialization and tardiness of reform in COSCO shipping (the national carrier) necessitated the need for foreign players to enter the industry to decrease costs even further (Heine 1989). For example, companies such as Danish giant Mærsk entered China already by the 1980's and develop a very large market presence, both in shipping, but also in logistics industries with investments through their third-party logistics arms, at the time branded Damco (Greve 2022). Mærsk controls the largest share of the China inbound and outbound containerized trade in TEU terms, even larger than China's own COSCO shipping, with a 9,7% share in the China-US lane and 20% in the China-EU trade in 2012. At the same time, Mærsk provides for a large share of China's overall liner shipping connectivity, and thus can be associated to the competitiveness of Chinese exports (Greve 2022). One of the explanatory factors, apart from the fact that Mærsk is the most competitive shipping firms in terms of value added to costumers and boasts of one of the few truly global shipping networks, is the key diplomatic relationships between Mærsk and top communist party members. The companies' good relationships with the Chinese government have been a key factor in being allowed to operate early on in China and a significant part of its success in the country (Greve 2022)[7]. Furthermore, Mærsk was the first shipping company allowed to have wholly owned subsidiary in China without a joint venture with a Chinese firm, and not just the first shipping firm to be allowed, the first foreign company in any sector. Finally, this 'special' relationship between Mærsk and China also reflects in Danish diplomatic missions in Beijing, where maritime business is top of the agenda.

projects were being set-up, and a reduction of duties once the projects became profitable (Aritua et.al. 2022). Of course, foreign investors also had to give away operational knowledge and ultimate control as the joint ventures were always limited to 49% foreign control (Cullinane and Wang 2006). Over time, foreign investors were afforded further privileges, such as operating in the domestic freight transport system, owning their own infrastructure, or undertaking cargo operations independently (Aritua et.al. 2022). These joint ventures allowed Chinese operators to learn and close the gap with foreign firms. They allowed for foreign capital to close the financing gap in some ports, brought new clients connecting them with Chinese ports and accelerated further reforms. By 2002, foreign equity limits were removed, and foreign investors could set their own prices for cargo handling fees, growing foreign investment into Chinese ports further (Aritua et.al. 2022). Chinese port SoEs also benefitted from government guarantees through financing their projects via the state-owned Chinese bank system, meaning that they financed expansion at a low cost. This practice has continued in their investments abroad. However, as ports rapidly expanded, inefficiencies started arising and excess capacity became an issue in some regions where industrial development started slowing down. The government then urged a reform of port groups and close collaboration between competing provinces, leading to the integration of port groups (Yang et.al. 2019; Aritua et.al. 2022).

Beyond ports, COSCO shipping group, is the most relevant actor in the shipping industry in China. This national carrier was created in the 1960s to compete in the modern shipping world (Heine 1989), at the same time as the government invested heavily in port infrastructure. COSCO now controls 11% of global market share in container shipping[8], after a recent state dictated mega-merger with China Shipping Lines, the other Chinese SOE in the shipping industry. Currently, COSCO is in the process of globalizing and transforming into an integrated logistics company (Yang etal. 2019, 105), and like other leading shipping companies such as Mærsk, is expanding trucking, storage, last-mile transport services and digital capabilities.

COSCO is governed by the State-Owned 'Assets Supervision and Administration Commission', while the general logistics and infrastructure reform is governed through the Ministry of Transport and Communications (MOT) and the National Development and Reform Commission (NDRC). These are all state organizations. The focus of these state organizations is on increasing the sophistication and

[8] See Alphaliner, top 100 shipping lines https://alphaliner.axsmarine.com/PublicTop100/

industrial upgrading of ships in China as well as infrastructural upgrading to improve logistic systems. At the same time, the National Development and Reform Commission place the transport industries as 1 of the key 10 industries of the Made in China 2025 strategy (Coe 2020). The strategy includes industrial policy provisions to stimulate high-tech developments in maritime industries[9] and augurs the further growth of Chinese maritime industries. The recently announced "double circulation" strategy from the Chinese State Council, underpins a desire by the Chinese authorities to further facilitate circulation both at home and abroad by means of new shipping infrastructure as a means for further capital accumulation.

China has successfully built a domestic maritime industry and a large shipping line in COSCO. In particular, and differing from the strategies of other container lines, COSCO offers a wide range of maritime transport services, bulk, tanker, and special ships as well as containerized cargo, making it the largest owner of shipping vessels globally at firm level with 1394 vessels as of 2022[10], and the 4th largest container shipping firm. The reason for this has to do with the development and security goals of COSCO and the Chinese government. As such, COSCO's goals are not purely profit seeking but reflect other economic and political interests, such as supply stability, broad transport capabilities and the service of Chinese interests in other industries and sectors, such as mining and energy. This follows the findings of other scholars of Chinese state-capital, which show that although commercial considerations are the main drivers of investment, other considerations beyond maximizing profit underpin overall business strategy (Lee 2017).

Finally, after the global financial crisis demonstrated the limits of pure export growth model, the Chinese government shifted its approach to economic development by focusing on innovation and domestic demand, as well as to better manage climate and environmental impacts of high energy intensive growth. This resulted in the development of macroregional plans, initiated by the development of the Pearl River Delta microregion, the Yangtze River Delta and Beijing and Tianjin region. At the same time the focus on innovation has also motivated port reform with intelligent shipping and the adoption of 'green' port technologies and

[9] See for instance "China Forecast to Lead Autonomous Shipping Sector by 2025." Lloyd's List. https://lloydslist.maritimeintelligence.informa.com/LL1131938/China-forecast-to-lead-autonomous-shipping-sector-by-2025

[10] See: https://en.coscoshipping.com/col/col6918/index.html#:~:text=As%20of%20Dec%2031%2C%202022,the%20third%20in%20the%20world.

management measures and standards, such as a switch to electric terminal operation equipment and installing shore power facilities (Aritua et.al. 2022). The government has also encouraged multi-modality in the transportation system in an attempt to move away from a highway based inland transport system to rail freight and further development of inland waterways to improve internal connectivity. Beyond the mainland, the Belt and Road Initiative is helping port firms expand abroad and continue growth. This is the focus of the next section.

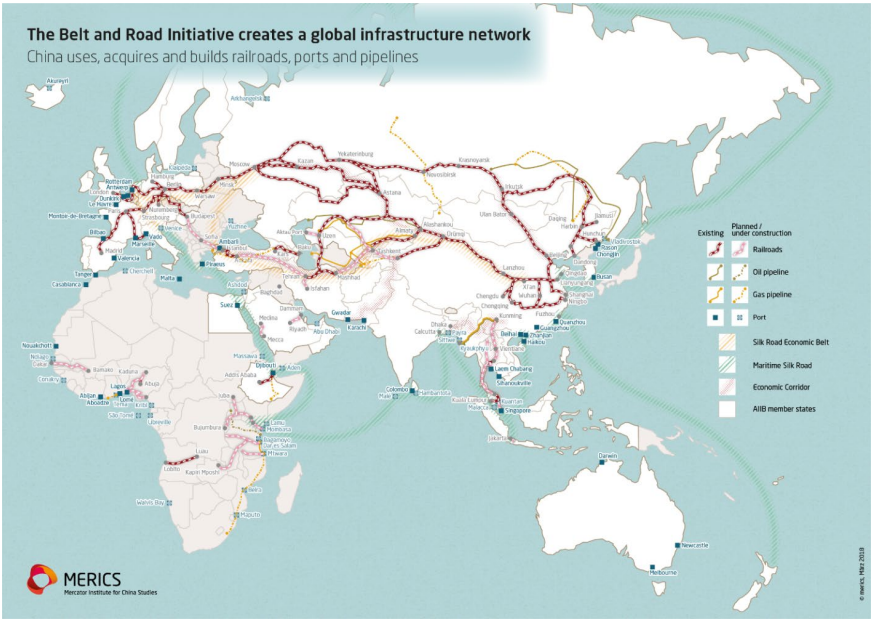
1.1.2. The Belt and Road Initiative as an object of study

As Cheng and Apostolopoulou (2023: 1) describe it, 'The Belt and Road Initiative (BRI) is the single largest infrastructure development project since the Marshall Plan with a scope and scale that has no precedent in modern history'. This massive project has produced since its inception in 2013 new connectivity and economic integration throughout Eurasia and Africa both on land and at sea[11] on the back of infrastructure projects, as figure 1.5 below shows. By stewarding a major infrastructure push encompassing transport infrastructure such as ports, airports, pipelines and railways, real state, industrial hubs etc. (See figure 1.5 below for an overview of transport infrastructure along the BRI), the BRI has created a presence in a variety of economic sectors of the global economy (Apostolopoulou 2021). As discussed throughout this dissertation, the BRI has, at massive speed and scale, reshaped local and global patterns of power and capital accumulation (Cheng and Apostolopoulou 2023; Schindler et.al. 2022; Mayer and Zhang, 2021).

This dissertation supports a conceptualization of the BRI "not as an inevitable matter of fact or a physical phenomenon, but as a socioeconomic and historically-geographically specific process that by being inherently bound up with questions of political economy, politics, and ideology it constitutes a form of knowledge/ power itself" (Cheng and Apostolopoulou 2023: 2; see also: Lin et al., 2019; Sidaway et al., 2020; Sidaway & Woon, 2017). I focus my inquiry on the materiality of the BRI or what Cheng and Apostolopoulou (2023) call the BRI as 'project' and the forms of capital accumulation processes and state-market relations it engenders.

[11] See Belt and Road portal at: https://eng.yidaiyilu.gov.cn/

Figure 1.5. Belt and Road Map



Source: MERICS (2018) https://www.merics.org/en/tracker/mapping-belt-and-road-initiative-where-we-stand. Although many issues exist with these types of mapping exercise[12], this is the one of most up to date maps providing an overview of transport infrastructure investment by Chinese firms along the BRI.

Through BRI projects, and within a context of changing global capital accumulation patterns, China attempts to postpone over-accumulation crises, in the form of spatial fixes (Summers, 2016; Zhang, 2017; Sum 2019; Su and Lim 2022). The BRI can be seen as spatial fix as it exports over-accumulated capital from China (Flint and Zhu 2019; Tekdal 2018), while also promoting infrastructure development globally that reorganizes, connects, and expands global supply chains and markets towards China (Summers 2016; Mayer and Zhang 2021; Schindler and Kanai 2021).

[12] Maps generally oversimplify the planned corridors of the Belt and Road Initiative; these projects are a part of a broader group of global infrastructures and shippers, and transport firms have many options to switch between these infrastructures. For ports, the selection by shipping lines of ports to call in has many strategic aspects associated with it (Notteboom and Rodrigue 2012).

At the same time this infrastructure push has been also characterized by an intensification of state-economic competition, exemplified by the China-US trade war, raising the specter of a new cold war (Schindler et.al 2021). This rise of geopolitical tensions, and the imperatives of global capital accumulation, have led to the rise of state-led economic initiatives, with the BRI posited as a prime example of the 'new state capitalism' (Alami and Dixon 2020a). However, within the context of Chinese political economy, the BRI is rather a continuation of the infrastructure-led development path China has been on since the start of the reform period, following policies such as the Great Western Development Strategy and the Going-out Strategy, both launched in 1999 to stave off accumulation crises in China[13] (Ye 2020; Yeh and Wharton 2016). As a key aspect of Chinese foreign economic policy, and a key ideological project under president Xi, the BRI is prominent in Chinese Five-Year Plans and guides economic decision making across all levels of governance within China (Cheng and Apostolopoulou 2023). Nonetheless, the BRI, particularly discourses surrounding the BRI, also relate China's geoeconomic paradigms, political strategies, and perceived threats in the maritime sphere (Blanchard 2020; Zhang 2017).

While critics overemphasize the power of Chinese actors within the BRI, the BRI also consists of local actors who have agency, occupy various positions of power in local economies and global production networks (Liu et.al. 2020) and determine the success of specific projects (Blanchard 2020; Flint and Zhu 2019). Thus, it is relevant to understand the context of specific projects and local economic strategies in shifting global capital accumulation patterns, and the translation of Chinese development experiences globally (Apostolopoulou 2021; Cheng and Liu 2022; Cheng and Apostolopoulou 2023).

This dissertation provides an analysis of the BRI, through the study of the political economy of global shipping, that integrates shifting global capital accumulation patterns, state policy, local agency, and geoeconomic competition. In doing so, it attempts to cut across the literature that sees the BRI as a pure Chinese strategy dominated by the CCP or as a fragmented set of projects within specific complex contexts. I showcase how the state and market are not in essence contrary forces in driving accumulation processes, but a common force in the global political

[13] Further discussion on accumulation crises in the Chinese political economy is presented in Chapter 2.

economy, that, in the case of shipping and BRI, reshapes infrastructures and the network of global trade in the context of intensified geoeconomic competition.

1.2. Aims, Research question and contributions

As section 1.1. discussed, new trade patterns and geopolitical conflicts are emerging. This dissertation outlines the competitive dynamics of the global shipping and logistics industry, the continued prevalence of the state in the global shipping regime and shows how changes in the global shipping regime relate to geoeconomics trends. To tackle this new wave of statism in the shipping industry and its consequences, this dissertation is guided by the following main research questions:

> ***How does the rise of China in the shipping sector, in part through the Belt and Road Initiative, challenge the trajectory and structure of the global shipping regime?***
>
> ***What does the changing global shipping regime tell us about new state-capital relations in the global economy?***

It attempts to answer these two main questions guided by 4 working questions:

1. How have changes in the economic development paradigm of China, induced by crisis of accumulation, been reflected in shifts of its logistics and shipping development strategy?

2. Why have Chinese SoEs in the shipping industry internationalized?

3. What are the political and economic consequences of receiving investments through the Belt and Road Initiative? What variegations can we identify across space, economies and regulatory jurisdictions among countries receiving investments?

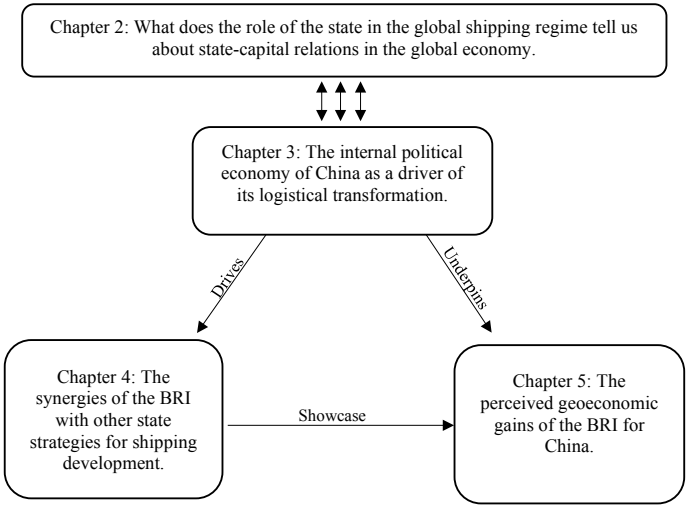
4. How has the acceleration of geoeconomic competition affected the role of the state in shipping?

These working questions are designed to facilitate answering the main research questions. The main research questions are designed to instigate a theoretical debate one the ways in which changing relationships between states and markets (in this case shipping markets) snowball into new regimes of capital accumulation and state

competition, with the focus on China and shipping. The first two working questions attempt to understand the internal and external factors that have pushed Chinese firms to internationalize and become global, which is the basis upon which the debate on Chinese state involvement in shipping has re-started. The third question seeks to tackle the agency of other states and firms that interact with Chinese shipping, to see how states navigate the Belt and Road Initiative in pursuit of their own interests. It also opens for comparative analysis of the different political and economic outcomes the project has engendered, nuancing the debate of Chinese influence over other states, and explaining the heterogenous economic and political outcomes of Chinese projects. The second and third questions motivate the study of shipping markets, their nature, and their effect in economic development while providing the basis for answering the main research questions, namely the ways in which Chinese global investments in shipping have reshaped the trajectory of the global shipping regime. The fourth question is designed to wrap up the study. It highlights how the reactions of other states to the perceived successes of Chinese involvement led to former defenders of the current global shipping regime to abandon their stance and become more directly involved in shipping markets.

These working questions inform the way in which this study is structured and, lead to a research design that attempts to understand 1) global shipping markets and the effects of the Belt and Road Initiative in global shipping markets 2) the economic and political imperatives that lead Chinese firms to internationalize and 3) strategic and geopolitical reactions to Chinese state capitalism in shipping. An overview of the research design is provided in figure 1.6 below.

Figure 1.6. Research design - IPE approach to the study of state-capital relations in the shipping industry



As shown in the figure above, this dissertation focusses on the political economic dynamics of China as the underlying phenomena in driving changes in the global shipping industry through the internationalization of Chinese firms. The accumulation crisis of the Chinese political economy discussed in chapter three informs both chapter four and five. Chapter four shows the ways in which Chinese investments abroad have synergistic relations with the strategies of other states and the way in which Chinese firms adapt strategies to local contexts. These synergies, but also conflicts, in the project showcase the perceived geoeconomic gains by China discussed in chapter five. Chapter five discusses how the BRI also has significance beyond the original rebalancing goals of the Chinese government, as it projects infrastructural power and sparks geoeconomic competition. In doing so, this dissertation attempts to draw out the implications of a changing global shipping regime given the rise of China, through the Belt and Road Initiative, in shipping markets. The overall contributions this study makes to the literature on shipping regimes, state capitalisms, and the Belt and Road Initiative can be summarized as follows:

Overall Contribution 1: The domestic political economy of China and its economic rebalancing affects the political economy of global shipping. Although the state has been a salient feature of the shipping industry, Chinese state capitalism has re-shaped shipping networks and created political conflicts.

Overall Contribution 2: Although political motivations for new shipping investments exist, an economic rationale derived from internal accumulation crisis in China underpins the current expansion of its shipping industry. This has ambivalent implications for the global shipping regime.

Overall Contribution 3: There has been a recentering of shipping networks towards Asia and particularly China, portending a possible shift in the global shipping regime. The response to this challenge is still emerging but it is foregrounded by both increasing statism from the West and liberalizing trends. Thus, a new wave of statism is occurring in a very liberal but politically salient global shipping sector.

Overall Contribution 4: The BRI, and more broadly the nature of Chinese political economy and Chinese economic strategies to deal with crises of capital accumulation, have redefined the role of the state in the global economy and contributed to rising state involvement in promoting, steering, and regulating capital accumulation processes amid rising geoeconomic competition.

With these contributions in mind the main argument of this dissertation is that although Chinese state-capital relations are qualitatively different from those of other maritime nations, the BRI and China's rise in the shipping industry does not pose a threat to the global shipping regime. In the global shipping regime, the state has been pervasive, and continues to play a role. As such, the challenge China poses to the global shipping regime is not one of a complete reshaping of power relations at sea. Rather what we see is a return to past statist forms of engagement, such as direct support of national shipbuilding industries and new practices like the Belt and Road Initiative to finance, build and operate infrastructures abroad. These new practices reflects both domestic political economic pressures on Chinese capitalism and structural pressures from capitalist markets that also drive other states to action. This creates the possibility of synergies between variegated forms of state capitalism, though also opening for possibilities of conflict. In geoeconomic terms, the global shipping regime finds itself, similarly to other sectors of the economy, caught in between a brewing confrontation between China and those who see China as a threat. In confronting China, these states have also turned to statist strategies to

defend their industries and invest abroad, adding more momentum to the statist wave in the global economy. The next section, on research design, explains how the study goes about exploring the research questions to make these arguments.

1.3. Empirical Material

This dissertation uses a multiplicity of methods of data gathering and empirical materials to answer the working questions presented in section 1.2. The dissertation works primarily with qualitative methods but presents statistical data to support claims in terms of investment growth, TEU[14] throughput in ports, the increased or decreased connectivity of ports and countries and other indicators to determine economic outcomes. Case study methodology is used in chapter four, while chapter three employs historical analysis of secondary sources and primary documents as the main sources of data. Chapter five relies on secondary material and primary documents, with interviews with policy officials and maritime experts also employed. In general, apart from chapter four, interviews are not directly used for analysis, but as guides for the analysis of secondary materials and as important sources of information on the functioning of shipping markets. Furthermore, my three months research visit in Singapore, and my visits to South Korea and Japan for conferences provided inspiration to look at Asian shipping comparatively and understand the historical development of the region in the shipping industry. This informs all three empirical chapters. An overview of the empirical material used to answer each working question is provided below in table 1.2.

Table 1.2. Overview of chapter contribution to the working questions and data used.

Working Question	Chapter	Empirical material used
How have changes in the economic development paradigm of China, induced by crisis of accumulation, reflected in shifts of its logistics and shipping development strategy?	Chapter 3	Chapter three analyses Chinese policy documents and strategies to understand the internal developments, while presenting statistical data on the transport sector in China.
Why have Chinese SoEs in the shipping industry internationalized? What are the national and global	Chapter 3 and 4	The answer to this question lies both within national political economy dynamics and the pressures of global markets, therefore aspects of

[14] TEU (twenty-foot equivalent unit), is a measure of twenty-foot-long containers to measure cargo volume.

political economic dynamics behind this?		both chapter three and four assist with this question.
What are the political and economic consequences of receiving investments through the Maritime Silk Road Initiative? Are there differences between geographical, economic, and regulatory contexts in receiving countries?	Chapter 4	Chapter four is a case study of a specific port investment. It relies on interviews with stakeholders involved in the port and statistics to determine economic outcomes.
How has the acceleration of geoeconomic competition affected the role of the state in shipping?	Chapter 5	The analysis of how the Chinese BRI is imbued with infrastructural power in the context of geoeconomic competition is achieved through secondary sources that focus on the content, strategy, and success/failure of BRI projects.

The project from its inception, was to be grounded in qualitative data gathering in the form of interviews and field work. However, given the covid-19 pandemic, particularly in 2020 and 2021, the methods of data gathering were primarily digital, and the project acquired a more comparative form rather than focus on a primary case. As such, secondary sources, databases, and policy documents form the empirical basis of most of the dissertation. Chapter four is a case study which tries to empirically test the arguments that run throughout the dissertation and relies on 11 interviews with key stakeholders at the port of Valencia as the key source information in addition to statistical material. All in all, 51 interviews have been conducted, 32 online, 2 via telephone and 17 in person (1 in Hamburg, 1 in Rotterdam, 8 in Singapore and 7 in China), see table 1.3. below for an overview. The interviews were semi-structured and generally started with open-ended questions regarding shipping markets, the Belt and Road initiative and geopolitical conflicts and followed a conversational style as the focus was on getting in depth knowledge from interviewees (Bryman 2012: 471-74). The 11 interviews regarding the case of Valencia focused on the timeline of the investments of CSP (COSCO Shipping Ports) in Valencia and the changes in the terminal since they started operating. In most interviews, the informants required anonymity, or at minimum no direct quoting, and requests for recording were generally denied. As such the primary method of recording the qualitative data from the interviews has been notetaking, sometimes during conversation and most times after the conversation had ended. Chinese shipping and port management firms were contacted several times between 2019 to late 2022, both at local levels (for the Spanish case) and at the international level. They either formally declined participation or did not answer

requests for interviews. Their views are captured in this study primarily through their public statements, the Chinese government's public statements, Chinese maritime policies, industry news, and through interviews with global business associations these firms are part of. Some of the maritime experts interviewed in this project, particularly consultants had collaborations with these firms and could give second-hand accounts.

Table 1.3. Overview of interviews

Group	Interviews and their purpose for this study
Policy Makers	10 Interviews, 1 with the Spanish port regulator (chapter 4), the rest with EU and officials from several European states regarding Chinese investments on ports in Europe and the European global connectivity strategy.
Shipping Firms	4 Interviews with 3 of the top 10 container shipping firms. These firms are Mærsk, Hapag-Lloyd and ONE. We discussed their position regarding state aid of their competitors and themselves as well as the state of shipping markets and the shifting geopolitical conditions for trade.
Port Firms	4 Interviews at port of Valencia; 2 with employees of the port authority and two with dockworkers at port of Valencia.
Business Associations/ Initiatives	7 Interviews with shipping business associations, these are, INTERTANKO, BIMCO, Asian Shipowners Association (ASA) and the Global Maritime Forum. The ASA provided with an Asian perspective on shipping issues and the geopolitical competition that is arising between East and West. In general, all business associations provided information and their outlook on shipping markets. With the Global Maritime Forum I discussed the role of China, as a financier and shipbuilder, in the new technological development for ships to be more environmentally sustainable.
Maritime Experts	26 Interviews with maritime experts. These interviews are comprised of 11 researchers on Chinese politics, the Belt and Road Initiative and Chinese Maritime Industries (5 of them based in China, 4 in Singapore and 2 in Europe); 5 Civil society organizations (1 international dockworkers union; 2 transport justice NGOs based in Brussels and 2 NGOs promoting BRI projects in the global south; 1 maritime expert based in a UN organization; and 10 maritime consultants, 8 based in Asia (5 in China, 3 in Singapore) and 2 based in Europe. These 26 interviews have helped guide my arguments related the rise of China in the maritime industry as well as understand perceptions surrounding, particularly, geopolitical discourses regarding the BRI.

The main strategy to gather interviewees and interactions with industry was through leveraging the large Danish shipping community as a start-up contact point and to build connections to Asian stakeholders through that initial contact with the Danish maritime community, one of the largest in the world. The case selection for the Spanish case was based on two decisive factors. First was the lack of exploration of the Spanish case within the context of COSCO's investments in Europe, which had already gathered most academic attention in Greece, but not in Spain. Second was

my connection to the Spanish context and knowledge of the language. Once opportunities to travel opened, a three-month research stay in Singapore in 2022 provided the opportunity to further engage with the Asian maritime community.

Another form of data gathering employed was participation in industry events. Industry events allow for interactions with a broad range of relevant actors as well as understanding the perspective of industry actors on themselves and their perspectives on events and issues within the industry. Policy events present the political positions of governments and allow space for political discourses to develop. Through 2020 and part of 2021, the events were online due to the pandemic. From late 2021 and all of 2022, in-person industry and policy events were again possible. I have attended several of these policy and industry events throughout the three years of my PhD. These are listed below in table 1.4. Apart from the events, other 'field' activities such as port visits, which I did in Hamburg and Singapore with port managers, also provided knowledge of the port industry. These visits inform my understanding of the economic rationales and structures that drive both firm and policy maker strategic decision making, and thus the overall political economy developments that are captured and analyzed in this dissertation.

Table 1.4. Events

Industry/Policy Events	Purpose for this study
TOC – Marine Supply Chain Asia - 2022	Three-day event held in Singapore for the technology providers of equipment for ships and ports. This event allowed understanding of the marine supply chain and the perspective of marine equipment providers on the status of shipping markets.
Marine Money Asia - 2022	Annual two-day event in Singapore where shipping finance stakeholders (banks, analysts, shipowners) discuss shipping market outlooks and issues. For this study this event allowed me to network with maritime professionals and get an Asian perspective on global shipping markets.
UNCTAD - Ad Hoc Expert Meeting on supply chain crisis and high freight rates – 2021 (online)	Expert panel describing the effects of Covid-19 on the shipping industry and the different bottleneck issues in the maritime supply chain.
The container shipping crisis: Its impact and why it is different from anything we have seen before – 2021 (online)	Expert panel on the effects of Covid-19 on the shipping industry and the different bottleneck issues in the maritime supply chain.
UNCTAD maritime webinar series: Protectionism in maritime economies: what does it mean for	Policy and research experts discussing the rise of protectionism in the shipping industry.

developing countries? – 2021 (online)	
Hong Kong: the Leading Global Maritime Hub is looking ahead – 2021 (online)	Industry event discussing Hong Kong's maritime hub as described in the event: "With the spatial transformation of the global economic power from the West to the East, the rising power of China's economy and its maritime sectors like ship owning, ship management, ship finance, shipbuilding, commodity trading, etc. make Hong Kong the excellent place for international maritime executives. At the same time, Hong Kong is looking forward to a brilliant maritime future by capturing the opportunities in high-end maritime services."
A global EU Connectivity Strategy as an extension of EU-Asia relations? – 2021 (online)	Event with European officials, researchers, and other diplomats to discuss the EU's revision of their external connectivity strategy, air critiques of the BRI and propose alternative models of transport infrastructure building around the world, primarily in South-East Asia. For this study, this event provided an initial steppingstone into t framing of European alternatives to the BRI.
Marine Money - Decarbonization: The View from China – 2020 (online)	Industry event on the shipping decarbonization debate in a Chinese context.
Marine Money - Banking on China: International Banks discuss Cooperation and Opportunity – 2020 (online)	Industry context on the shipping finance industry in China.
Infraestructuras y comercio internacional en la postpandemia: Rol estratégico en el arco mediterráneo europeo - 2020 (online)	Webinar discussing the historical development of the port of Valencia and its future expansion plans post-pandemic, as well as its role servicing the Spanish economy.
Danish Maritime Days – 2020 (online)	Industry context on the maritime and shipping industry, with particular focus on decarbonization.
International Shipping Forum China - Capital Link – 2020 (online)	Industry context on the maritime and shipping industry in China.
What Asian shipyard re-organization means for the maritime supply chain – Riviera Maritime – 2020 (online)	Industry context on shipbuilding markets.
Online High-Level Meeting on Sustainable Ocean Business and the 2030 Agenda – 2020 (online)	Industry context on the sustainability debate in shipping.

The final form of qualitative data gathering employed in this dissertation comes in the form of primary documents. Specially chapter three analyzes Chinese policy in

relation to internal state planning for infrastructure development. These documents are primarily in Chinese, and were analyzed by my co-author, Alexander Chen. Other key documents such market reports from consultancies or specialized shipping intelligence firms are also used as key secondary material to gather information about shipping markets and strategic decisions by shipping firms and to track Chinese investments in ports.

The dissertation also employs statistical data to analyze the shipping industry (see table 1.5 below for an overview). The UNCTAD liner connectivity index is used as a metric of connectivity 'success' in Belt and Road Initiative projects. Connectivity is regarded in maritime studies as a key metric supporting trade facilitation and a reduction of export costs (Fugazza and Hoffman 2017). China already has the highest global connectivity of any country, and its bilateral connectivity metrics indicate its undeniable importance to the shipping network. The Belt and Road increased the centrality of China in the global shipping network, particularly in the global south (Lee et.al. 2017). For chapter four, more granular data on ship traffic at port terminal level was used to understand the changes to ship traffic after COSCO ports investments in Valencia. Data from Alphaliner was used (Figure 4.4 in chapter 4). For chapter four also the TEU throughput datasets from Valenciaport were used, and traffic data from other European ports was taken from Eurostat. Chapter three uses several datasets from the OECD on transport investments and costs in China. Chapter five uses Boston Universities BRI investment tracker as one of its main sources for information on all global port investments by Chinese firms since the inception of the BRI (See Table 5.3. in chapter 5).

Table 1.5. Overview over databases employed

Database	Purpose and usage in this study
UNCTAD liner connectivity index	UNCTAD connectivity data used to observe if receiving BRI investments in ports improves overall connectivity to the global shipping network.
Alphaliner traffic data and Alphaliner TOP 100.	In chapter four, I use traffic data for the Port of Valencia, at terminal level, to understand the changes in traffic after COSCO ports took over the main terminal at the port. Alphaliner's TOP100 shipping lines market share indicator is also used in several instances in this study.
Port Authority traffic databases and Eurostat.	Chapter four employs port authority databases on traffic measurements as well as aggregate measures from Eurostat.
OECD Freight transport databases	Databases on Freight transport growth and Transport infrastructure maintenance costs have been used in chapter three to understand the development of the Chinese transport system. These indicators are built by the OECD through collaborations with national statistical bureaus.
Boston University Global Development Policy Center – Chinese Overseas Investments database	This database compiles all investments made by Chinese policy banks and Chinese SoEs linked to the BRI. It has been used to compile all port investments where Chinese firms are involved, and this data is used in Chapter seven.

The diversification of data sources as explained above, provides for triangulation of sources and a balanced approach for building the arguments of the empirical chapters. The analytical tradition of this dissertation, given that it is built upon independent articles can be said to be one of what Susan Strange in 1991 called an eclectic approach to international political economy (Strange 1991). It does so to analyze the data in the manner deemed most appropriate and keeping in mind the most important lesson of the political economy tradition, understanding who wins and who loses from political economic relations. Chapter two provides the theoretical framework and analytical lens through which this data has been analyzed.

1.4. Outline of the dissertation

The dissertation unfolds the contributions and arguments presented in this chapter to answer the research questions posed. Chapter two discusses the theoretical framework of the study and attempts to tackle the first working question, how the changing role of the state in the political economy affects the global shipping regime. This is done by engaging with the literature on new state capitalisms, the debates surrounding state planning and industrial policy in accumulation processes

in China and by engaging with the debate on geoeconomic competition with China through the concept of infrastructural power.

Chapter three is the first analytical chapter and presents the first article in the collection. It tackles the impact transport infrastructure planning has had on the nature and structure of Chinese Capitalism in its industrialization phase, and the changes it is currently experiencing as China is trying to shift its capital accumulation model. The main contribution of the chapter is to the debate surrounding China's economic development and its current shift towards a new mode of development. The chapter is empirically centered on transport and logistics. The contribution is conceptually focused on what we coin the "spatial division of logistical integration" which requires logistical fixes in the face of capital accumulation crises from prior modes of development that have created major inequalities between coastal and inland regions in China. The chapter concludes that transport investments in Chinese inland regions have been motivated to rebalance the Chinese economy in wake of a crisis of accumulation in its export driven model in the coast, attempting to reconnect inland regions with the coast, but also with global supply chains through investments in infrastructure. However, this rebalancing also generates contradictions, particularly when it comes to connecting inland China to the rest of the world through the BRI.

Chapter four tackles a case study on the opportunities and conflicts Chinese firms meet when investing abroad. The chapter showcases the synergies between qualitatively different forms of state capitalism and between shipping SoEs from China (COSCO) and Spain (Valenciaport) amid political tensions. These synergies improve the performance of port of Valencia and connect it further to China in an attempt at diversification away from being a key hub of MSC[15]. The chapter contributes to the literature on new state capitalisms via a specification of the concept of State Capitalism, as relational and variegated, and further typologized in qualitatively distinct forms as 'Expansionary' or 'Commercial'. This shows the different motivations behind the Chinese and Spanish forms of state capitalism. Furthermore, the case is posed as an economically positive case, albeit with uneven development consequences, of Chinese state capitalism ‘touching down’ and interacting in a specific sector and city to counterbalance the many negative cases portrayed in the literature. The main results of the synergies between Spain and

[15] Mediterranean Shipping Company, currently the largest shipping company in the world by TEU capacity.

China are the increased growth and importance of Valenciaport in the European and global shipping network and its diversification as a container port.

Finally, chapter five addresses increased geoeconomic competition tensions between China and the West amid shifts in the balance of the global shipping network towards China, and the responses from the EU and the US via the creation of new global infrastructure initiatives to rival the Belt and Road Initiative. The chapter contributes to the growing literature on China as a global actor with an analysis of the geoeconomic calculations behind BRI investment. Conceptually it does this by engaging with the concept of infrastructural power, trying to dissect the infrastructural power of shipping more generally and the distinct forms it takes. It highlights the parallels and differences between infrastructural power emanating from the West (Neoliberal Infrastructural Power) and from China (State Capitalist Infrastructural Power). The chapter surveys the effects of the BRI in the global shipping network and the growth of connectivity for BRI countries after shipping investments. For developing countries, the BRI is still the only initiative satisfying developing countries material needs to fill their infrastructural gaps and increasing global connectivity.

The sixth and final chapter discusses the implications of Chinese state capitalism for the global shipping regime, arguing that the state has been pervasive in shipping and the governance of the ocean more generally, both for economic and geopolitical reasons. However, Chinese state capitalism has necessitated new strategies and modes of intervention by other maritime nations, who find themselves fighting statism with increased statism.

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Chapter 2. Theoretical foundations – The variegated roles of the state in the shipping industry

This dissertation explores the ways in which Chinese domestic and foreign policies in relation to shipping affect global shipping markets. Theoretically I explore the role of the Chinese state in shipping and logistics in five theoretical movements. First, I showcase how a crisis of overaccumulation in China due to its capitalist development paradigm, which is currently shifting, necessitates spatial fixes. Secondly, within these spatial fixes, I focus on how *logistical fixes* initiated by the Chinese state, are remaking transportation networks within China and globally. These two first theoretical movements are explored in section 2.1. Thirdly, I explore in section 2.2 the specific modes of governance for the shipping industry in Asia, anchored in developmental states, and in China, conceptualized as variegated state capitalism. These modes of governance showcase the institutional conditions that allow for logistical fixes to materialize in the shipping industry. Finally, I move on to drawing out the global political economic implications of the rise of these modes of governance in shipping. I do this in two theoretical steps. First, by arguing for the relevance of geoeconomics to an understanding of how market control and access gives states power in the political economy. Second, I operationalize the discussion of geoeconomics by addressing the infrastructural power of shipping and the China model in third countries. These theoretical steps allow me to uncover the national implications and geoeconomic implications of Chinese infrastructure expansion in shipping. Territorial implications are evident in the boundaries of the state, as the management of logistical fixes for capital accumulation through state policy demonstrate the power of the state in shaping development outcomes. Geoeconomic implications are evident as states attempt to project infrastructural power abroad to secure capital accumulation, leading to competition for the control of existing and new shipping infrastructures across the globe. The strategies and logics of different states in controlling these infrastructures at home and abroad showcase the continued relevance of state planning, policies, and institutions in governing markets as the literature on new state capitalisms discussed below showcases. While

these state strategies are sometimes in competition, they can also be synergistic and collaborative[16].

2.1. China's development, capital accumulation crises and logistical fixes

The economic rise of China, called an 'economic miracle', has been widely explored, and general interest in the political economy of China continues to grow (Huang 2008; Hung 2008; Su and Lim 2023; Ye 2020). From a very impoverished nation in the early 1980s China has now become 'the factory of the world' and the second largest economy in the world. It is now becoming a competitive global innovation economy[17]. The very rapid growth of the Chinese political economy, and its rapid institutional change from a socialist planned economy to a market economy have been key focuses of academic debates (Huang 2008; Hung 2008; Naughton and Tsai 2015). And as China continues to grow and solidify its position as an economic superpower, it has motivated questions concerning Chinese influence in the international political economy and the challenge this poses to the ostensibly liberal international order (Breslin, 2017;2021; Nölke et al., 2015). To assess the real challenge of China to the current structure of the global political economy, this section discusses both what has made China's economic model successful and what constraints on its economic model exist (Chen 2022; Klein and Pettis 2020).

Consensus exists, that China is a state driven capitalist economy, with no real separation between state institutions and economic actors[18]. While some have used this as a predictor of the Chinese economy's failure in the long term[19], these predictions have so far been wrong as the Chinese Communist Party maintains a strong role in the economy and has steered the economy through major crises successfully in the past (Chen 2022). This resilience has been primarily attributed to the capacity of the state apparatus to reinvent itself, learn, and motivate

[16] This chapter is built using parts of the theoretical sections of all three articles in Section 2, while also expanding on these theoretical discussions to engage with broader debates.
[17] See: https://chinapower.csis.org/china-innovation-global-leader/
[18] Though this separation can arguably be only made in the abstract in more liberal models, as in the end in a practical sense the state underpins economic actors and institutions in liberal market economies equally (Nölke et.al. 2015; van Apeldoorn et.al. 2012).
[19] See for instance: https://www.aei.org/op-eds/the-end-of-the-chinese-economic-miracle/ or https://www.forbes.com/sites/billconerly/2021/05/04/chinas-economic-miracle-is-ending/?sh=67e0f0faaa9d or for an older version of similar arguments: https://www.economist.com/weeklyedition/2012-01-21.

bureaucratic effectiveness (Ang 2016; Ye 2020; Chen 2022). This resilience also informs relations with the private sector in the form of a variegated brand of state capitalism.

However, some of the negative connotations of the form in which the Chinese state has secured massive accumulation processes within China have gone unnoticed with its huge economic rise (Klein and Pettis 2020). The Chinese state has steered the production of state capitalist spaces of accumulation and it has done so through various and experimental forms of spatial planning and policy, promoting, and coordinating uneven geographical developments. These uneven geographical developments have exacerbated conflicts between central and local governments and heightened inequalities between the coastal and inland regions of China (Chen 2022; Rolf 2021). These uneven and unequal geographical patterns of Chinese development drive the policy incentives for Chinese transport firms to expand inland and internationalize. These inequalities also necessitate state planning and management to 'hold together' the Chinese mode of capital accumulation amid continuous crises.

Spatial planning and governance have constituted "recursive spatial tool[s]" (Lim, 2014, p. 242) harnessed as part of China's developmental paradigm[20]. Policies directed at molding Chinese spaces of capital accumulation have both supported its rapid economic ascendance and harbored contradictory tendencies threatening its political and economic stability. Its exceptional rise during the Open Door Policy as the leading destination for global outsourcing of assembly-oriented manufacturing (Chan, Pun, and Selden, 2013) did not evolve evenly but was instead characterized by a coastal-inland gap. The central government promoted the selective development of the coastal region, as part of the Coastal Development Strategy in 1988, chosen to 'get rich first' as part of its gradualist development strategy (Fan, 1997; Lim, 2016). The coastal region was transformed into an attractive destination for foreign investments through the formation of special economic zones (SEZs)[21],

[20] This debate on spatial planning and the inland-coastal gap is borrowed from chapter 3 section 3.2.

[21] Of course, SEZ are only one of the factors that induced massive economic development in China, bureaucratic reform and an already existing industrial base under the planned economy also aided massive catch-up development (Ang 2016). However, for the purposes of this dissertation SEZs are the key logistical innovation facilitating economic transformation.

which extended foreign enterprises investor privileges such as tax rebates, access to land and infrastructure, and favorable import-export policies.

China's developmental paradigm during the Open Door Policy was consequently built on a strategy of manufacturing-led development and export-oriented industrialization. This strategy was buttressed by the spatial division of labor between the coastal and inland regions that mobilized the latter to support the rapid integration of the former into the global economy. This spatial division of labor entailed massive investments into the functional specialization (Massey, 1995) of (a) the coastal region in assembly-oriented manufacturing, and (b) the inland region in an auxiliary role of the provision of raw materials, intermediary inputs, and heavy machinery funneled primarily through state-owned enterprises (Ang, 2016).

While the spatial division of labor between the coastal and inland regions secured the rapid growth of the Chinese economy by enhancing the comparative advantages of the coast, it also gradually fomented an overaccumulation crisis. In the context of China, the overaccumulation crisis was catalyzed by overinvestment in industrial capacity to support its role as a global export platform, which made its economic engines reliant on external demand to absorb surplus capital. China's developmental paradigm was thereby premised on a pathological co-dependence with the United States and European Union, which accounted for around half of China's exports in 2007 (Palley, 2006; Jessop, 2013). Global exports had to expand in lockstep with China's economic growth to avoid creating excess capacity, which was impossible in the long-run due to rapid economic growth. The build-up of excess capacity was estimated to afflict 75% of China's industrial sector during the height of China's export-oriented industrialization strategy prior to the global financial crisis in 2008 (Rajan, 2006). A notable characteristic of the industries suffering from excess capacity was the prevalence of state-owned enterprises centered around heavy industries such as aluminum, cement, and steel (Szamosszegi and Kyle, 2011). These were geographically concentrated in the inland region because of its functional specialization as auxiliary support to the coastal region.

While the problem of overcapacity was relatively unnoticed during the 1980s, the CCP mobilized multiple responses and reform packages in the late-1990s as structural imbalances started to manifest (European Chamber, 2016; Ang 2016; 2017; 2018). These policies can be interpreted through the lens of Harvey's (1982) outline of potential solutions to overaccumulation crisis through the institutionalization of so-called spatial fixes, whereby the state attempts to

temporarily "fix" the problem of surplus capital or labor by (a) expanding or creating new markets to increase effective demand, or (b) relocating and exporting to more profitable sites of investment that can absorb idle capital. Consequently, the CCP initiated a sequence of spatial restructuring plans in the late-1990s, which targeted respectively the western provinces (1999), central provinces (2003), and northeastern provinces (2004). These policy initiatives would partly redress the overaccumulation crisis by increasing effective demand, such that the excess capacity in heavy industries could be absorbed in a round of infrastructural investments and the build-up of the inland industrial base (Tian, 2004). However, the overaccumulation crisis did not fully resolve because such investment plans only temporarily deferred the problem, rather than solving the underlying structural imbalances linked to the spatial division of labor between the coastal and inland regions.

As the spatial restructuring plans and the attempt to institute a spatial fix in the 2000s did not resolve the overaccumulation crisis, Xi Jinping's administration promulgated a policy of "the New Normal" in response to multiple consecutive years of declining growth following the global financial crisis (Zhang and Chen, 2017). Faltering economic performance signaled the exhaustion of China's manufacturing-led development and the vulnerability of export-oriented industrialization that is excessively dependent on foreign demand and global export markets. Finally, the CCP acknowledged the need to rebalance its growth engines and change its developmental priorities (Rolf, 2021), catalyzing the managed transition toward a New Normal. Instead of the initial strategy to increase demand to offset excess capacity, the New Normal strategy aimed to reconfigure the spatial division of labor between the coastal and inland regions and institute a new spatial fix premised on rechanneling investments into new industries and sectors to redress the overaccumulation crisis.

Two major policy agendas underpinned this reconfiguration. First, the Made in China 2025 (MIC2025) national strategy targeted the coastal region for industrial upgrading centered around service-based and innovation-driven development (Ma *et al.*, 2018). Second, the central government started to redirect investments as part of the 12th FYP (2011-2015) to the inland region to relocate manufacturing activities that had become too expensive on the coast toward the less developed inland region (Yang and Gallagher, 2017). The effects of this policy can be seen in the increasing pushback against low-end manufacturers in coastal provinces, leading producers to relocate to inland provinces such as Anhui, Jiangxi, Hubei,

Hunan, Henan, and other underdeveloped interior regions. Consequently, the New Normal has entailed a new spatial division of labor based on the functional specialization of the coastal region in high value-added activities (finance, design, and research and development), while the inland region has become a hub for manufacturing.

These crises of accumulation and overcapacity determine behavior not only at home but abroad. And as the coastal Chinese economy transforms for its post-industrial moment, and as the inland regions industrialize[22], the requirement for the Chinese transportation system and the global shipping regime also shifts within these national and global patterns of capitalist accumulation and crisis. These shifts are explored in the next section.

2.1.1. Maritime Circulation, state planning, and logistical fixes

As described in chapter 3, an overaccumulation crisis is a crisis of surplus capital or labor that cannot be viably absorbed into locally profitable investments and consequently valorized (Harvey, 2001). Harvey (2015) frames this foundational crisis of the capitalist mode of production as the challenge of maintaining the continuous flow and integration of capital accumulation between production, circulation, and consumption. Due to the impulse of expansion and the continuity of flow as a condition for capital's existence, "capital must circulate continuously or die" (Harvey, 2015, p. 73). This is a key tenet of the spatial 'fix' as capital moves away from places of low profitability and valorization and into new spaces of higher profitability, allowing capitalist development in new spaces that can absorb the global surplus of capital (Harvey 2015). 'Fix' has two key connotations as a fixing of capital within infrastructural investment and an expansion of the built environment, and also a metaphor as resolution to the crisis tendencies of capitalism by reshaping spaces and restructuring local economies (Harvey 2003; Chen 2022).

Transport infrastructure plays similarly a double role in fixing crisis tendencies, by fixing capital in the built environment, as roads, rail lines and ports, but also by comprising the means of restructuring local economies through enhanced connectivity to global capital. However, this double role of transportation infrastructures has been an unexplored component in the body of literature on 'fixes'

[22] This double movement of industrialization in the inland regions and deindustrialization in the coast also showcase the variegation of Chinese capitalism that will be the focus of discussion in section 2.2.

(Danyluk 2018; Sibilia 2019). The integrated circuit of global capital has been buttressed by circulation processes that have linked resource frontiers and production nodes through infrastructural and logistics networks (Schindler and Kanai, 2021). Danyluk (2018) introduces the cognate concept of a 'logistical fix' as a multi-faceted spatial fix. This concept seeks to recenter the importance of logistics and infrastructure-led development in facilitating integration between different moments of the capital accumulation process. As the capitalist mode of production is a generalized system of commodity production, exchange, and consumption, capital can only valorize itself and pursue its endless expansion if it can continuously produce and exchange commodities for a surplus. To this end, logistical systems ensure that capitalist enterprises can source input factors and circulate finished commodities to end consumers through various logistical infrastructures such as transportation infrastructures, distribution centers, and storage facilities.

Logistical fixes can be products of state intervention. The state mobilizes spatial strategies to mold the locational geographies of capital accumulation to secure "organizational coherence, functional coordination, and operational unity" (Brenner, 2004, p. 88) between spatial planning and the accompanying economic model. Logistical fixes concretely manifest in the form of built infrastructural environments, such as urban ensembles, communication networks, transport connectivity (roads, ports, bridges, and railways), industrial zones, and logistical parks. The Chinese state aims to create a favorable environment in the local economy to attract global investments by molding the domestic locational geographies of capital accumulation. From this vantage point, logistical fixes can be construed as targeted investments in infrastructural networks to create integrated and networked spaces of capital circulation, facilitating the expansion, profitability, and preservation of capital. Based on this state-capital nexus, a reciprocal relationship is thus formed between capital and the state, as the state coordinates where to target large-scale investments in infrastructure and logistical systems to mutually realize interests to stimulate the conditions for profitable spaces of capital accumulation (van Apeldoorn, de Graaff and Overbeek, 2012).

The importance of logistical fixes and the logistics integration of production is a result of the logistics revolution in the 1960s based on advances in telecommunications and transportation, which resulted in space-time compression, mitigating spatiotemporal constraints on global production (Carnoy and Castells, 2001; Cowen, 2014; Danyluk, 2018). There has effectively been a shift from a

vertical production system toward a horizontal and technical division of labor, resulting in "the dual process of separating the functions of conceptualization from those of execution, and of the increasing fragmentation of the tasks of execution" (Massey, 1995, p. 32). Flexible modes of production have enabled corporations to 'slice up' supply chains into discrete, modularized productive segments, enabling corporations to diversify their allocation of productive processes horizontally to the most competitive localities.

From this vantage point, logistical fixes form the networked spaces of capital accumulation linking a complex chain of internalized and externalized production processes through "planning, coordinating and controlling material, parts and finished goods from suppliers to the customer" (Stevens, 1989, p. 3). Logistics matters for the valorization of commodities because, whenever capital is in circulation, the process of valorization is practically interrupted. To this end, logistical processes realize value by providing circulatory services (such as storage, customs clearance, transportation, packaging, cargo management, and tracking) to reduce circulation/transit time by efficiently coordinating supply and demand. For Chinese capitalism, the state has mobilized logistical fixes by adapting, accelerating, expanding, and improving logistical processes to support the continuity of capital accumulation.

In parallel to the spatial division of labor between the coastal and inland region, we can introduce the cognate concept of 'spatial division of logistics integration' to signify the differential logistics integration of regional spaces with production networks and value chains. The relevance of the concept lies in the distinction between the respective functional specialization of the coastal and inland regions, exerting different logistical requirements for participation in processes of capital production and circulation. Different forms of functional specialization require different capabilities in logistics and infrastructure, depending on the externalized and internalized relations that regional economies form with regional and global production networks. Regional advantages can thereby be strengthened through a spatial division of logistics integration, despite the constraints of scarcity of resources in a developing economy, by leveraging the interactive complementarity between regional economies with (relatively) limited but specialized patterns of infrastructural development (Coe et al., 2004). More concretely, the interplay between absolute and comparative advantages among regional economies is realized through the targeted and selective development of localized transportation networks, which produce functionally differentiated patterns of infrastructural

development that jointly reduce costs or increase the competitive position of one regional economy, possibly at the expense of the other.

Like spatial fixes, logistical fixes should thus be analyzed from a processual perspective because they are instituted and tendentially unstable processes (Polanyi, 1957). Logistical fixes can only temporarily defer or spatially displace the crisis tendencies of the capitalist mode of production by lowering costs, expanding markets, or increasing profitability. The stabilization of capital accumulation is thus always provisional and requires continuous re-stabilization that yields new contradictions that will, in turn, form the conditions under which future contradictions emerge (Jessop, 2008). From this perspective, past rounds of logistical and infrastructural development form the inherited geographies upon which new logistical fixes must be built. The institutionalization of new logistical fixes thus needs to address inherited contradictions and patterns of unequal development through new layers of logistical development and restructuring. The crisis tendencies that form the antecedents of successive rounds of logistical fixes can be categorized as either frictional or structural (systemic).

Frictional crises of logistical fixes refer to contingent shocks or disruptions, which can consequently disrupt logistical flows and lead to delayed supplies, higher costs, and lower profitability. Such vulnerabilities can be exemplified by instances in which circulation processes have broken down due to disruptions. For example, only in a 2-year period, logistical and supply-sided bottlenecks (because of the Covid-19 pandemic), accidents (the recent Suez Canal blockage), warfare (Russia-Ukraine war and disruptions to energy and food supplies), or labor conflicts (strikes by Canadian truck drivers) have wreaked havoc on global supply chains. Scholars in critical logistics and geography have, in this connection, showcased the ample role states play in ensuring the continued reproduction of circulatory processes (Cowen, 2014; Campling and Colas, 2021). While such exogenous shocks can customarily be resolved relatively quickly (Suez Canal blockage), they might occasionally trigger a systematic logistical restructuring or the formation of new logistical fixes altogether, such as the increased re-shoring and near-shoring due to the Covid-19 pandemic. Structural crises refer to systematic changes to the broader economic model, which impose new logistical requirements for capital accumulation. In this sense, to successfully move to its new model, China must reconfigure its prior logistical system and address the frictional or structural crisis of its prior logistical fix.

2.2. States vs. Markets, the role of the state in the economy

This dissertation engages in the discussion on the rise of 'new' state capitalism by discussing how state-capital relations in the Chinese shipping industry inform new patterns of global capital accumulation and intensified geoeconomic competition. It does so by first discussing state pervasiveness in East Asian economic governance. It then focuses on the variegation debate of state-capital relations, suggesting a contextual, multi-scalar and relational approach to study the ways in which modes of governance interact with global markets. It is in this context that Chinese shipping policies and the relationship of Chinese shipping firms and the Chinese state must be seen to understand the various political and economic trajectories of shipping infrastructure projects.

The state is back in discussions of economic governance after years of the predominance of an ideology focused on the primacy of markets. The transatlantic financial crisis, the development boom in China and the ever more urgent need for a climate transition have revived debates surrounding the role of the state in markets. Although the political economy field focused on industrialized countries argued for the withering of the state as globalization spread, the state role in the economy was ever present, even as multinational corporations became more powerful, and exceptionally prominent in Asia (Gabusi 2017). This pervasiveness has now been superseded by new, and more visible, forms of state intervention. (Babic 2023; Alami 2023). One way to describe this contemporary increased state intervention has been through the moniker of 'new state capitalism', signifying a resurrection and rise of old and new state intervention tools in the economy (Alami and Dixon 2020a; 2020b; Babic 2023).

As Babic (2023: 16) argues 'states reinvented themselves as owners within the opportunity structures that neoliberal globalization created'. This reinvention and expansion of state presence in markets, he argues, also reflects changes in state capabilities and power, and ultimately a rearrangement of the relationship between state and markets in a moment of capitalist structural change (Babic 2023). This reinvention of the state encompasses old tools of economic competitiveness such as industrial policy, state owned companies and planning, and development banking but also new forms of state intervention such as internationalized state-owned enterprises or sovereign wealth funds (Alami and Dixon 2020b). Furthermore these 'new' state roles in the economy signify the rise of a pragmatic state looking to

create national competitiveness out of the forces of global capitalist accumulation (Alami and Dixon 2021).

Part of the 'new' in new state capitalism are the geographies and modalities of state market interactions (Alami and Dixon 2021). Although China was the first to receive the 'new' state capitalist label (see Bremmer 2010), industrialized countries modalities of state intervention also offer useful examples of 'new' state capitalism (Kim 2022; van Apeldoorn and de Graff 2022; Wood et.al. 2023). Looking at the East, rather than a 'return' of the state we can talk of state pervasiveness, as virtually all Asian industrialized countries have used protectionist measures and industrial policies as economic development tools successfully (Wade 2020). In general, East Asian development experiences illustrate the need to go beyond dichotomies of state or planned economies and laissez faire market development and focus on the institutional conditions for capital accumulation and growth, which many have called the developmental state. Although the prominence of the state in East Asian development dominated the literature from the 1990s up until the early 2000s (Amsden 1992; Wade 2004) with Chalmers Johnson (1982) coining the term 'developmental state' back in 1982, debates about the pervasiveness or disappearance of the East Asian developmental state have continued (Gabusi 2017; Wade 2020).

The end of the cold war meant the end to some of the global conditions which allowed early East Asian industrializers to successfully develop. The US had less incentive to allow non-communist Asian countries to continue having preferential access to the US market and pushed for more liberalization (Stubbs 2009). Even though the opportunity space for these countries shrank amid the expansion of neoliberal globalization and the entry into force of stricter WTO trade rules, East Asian countries adapted to remain competitive (Gabusi 2017; Hayashi 2010; Rodrik 2006). Of course, the economic slowdown in Korea, Japan and South-East Asia also coincided with massive industrial development in China, following similar strategies of state involvement in industry, although with Chinese characteristics (Huang 2008). Similarly, the Chinese state adapted its industrialization to 'time specific constraints' (Gabusi 2017:245) as Babic (2023) also argues in the context of the new rise of 'state capital' globally.

In other political economy fields, similar debates arose on how to identify and categorize different levels of state involvement in markets. One prominent debate was the varieties of Capitalism approach (VoC) which focused on the institutional

constellation of relationships between states and market to explain divergences in economic models (Hall and Soskice 2001). These scholars compared Anglo-Saxon and Ordoliberal models but had little to say about Asian state-market relationships (Peck and Zhang 2013). The 2008 global financial crisis and the stagnant rate of growth of particularly European countries the last decade has led to revived arguments about the need for an active state to stave off crises of capital accumulation (Wigger 2023). In the end, it was Asian countries', particularly China, rapid state intervention which re-induced demand in the global economy and kept the global economy going in the 2010s (Gabusi 2017). Rather than speaking of one Chinese capitalism, we must speak of variegated state capitalisms within China. The problematization of China as a monolithic model, mostly within the comparative capitalisms' literature, is key to a stronger understanding of the methods of capital accumulation by Chinese firms and government institutions at home and abroad (Ang 2016; 2020; Ye 2020; Chen 2022). Variegated capitalism moves away from seeing China as a single model, showcasing Chinese capitalism as relational, and based on combined and uneven developments within capitalist variegation (Alami and Dixon, 2021; Dunford, Gao and Liu, 2021; Rolf, 2021; Chen 2022). The China model is a mosaic of geography, regional sub-models and multi-scalar relationships with local and global production networks and markets (Zhang and Peck 2016).

This section has contextualized the 'new' rise of the state in debates within global political economy, showcasing the pervasiveness of state action in markets, with particular focus on Asian state-capital relations. This foregrounds a larger discussion of the role of the state within the global maritime industry. The next section relates the East Asian modes of governance to shipping policy conceptualized within the notion of the dynamic maritime state.

2.2.1. The role of the state in transport and shipping - New State Capitalism and the dynamic maritime state

This section explores how the Chinese political economy, and its state capitalist economic model relates to global patterns of accumulation in relation to shipping and logistics The next section explores how the Chinese economic model of economic expansion abroad resonates within debates in geoeconomics and infrastructural power. The role of shipping services and shipping infrastructure in economic development as both a precondition and a tool for capital accumulation has been relatively unexplored in political economy and human geography (Coe 2014; Chua et al. 2018). Shipping and logistics have been perceived in more

mainstream economic literature as a matter-of-fact service and support function to production systems (Hesse and Rodrigue 2006; Greve 2022). This misses the key role transport and logistics play within the global political economy. Transport and logistics are key connectors of global capital and circulation capital which creates economic value within the capitalist system (Chua et.al. 2018; Coe 2014).

Transport and logistics have intrinsic power (Neilson 2012). Economic power in the necessity for physical products to circulate to markets for realizing their value, but also geoeconomic power, in their role providing connectivity to the global economy and undergirding global circuits of capital (Harvey 2015; Chua et.al. 2018; Neilson 2019). It is within this debate on the role of transport and logistics in capital accumulation, that the rise of 'new' state capitalism is discussed in this dissertation, as states in variegated ways, attempt to remain competitive in the global economy (Alami and Dixon 2021; Peck and Zhang 2016). Taking this accumulation lens as the point of departure does not mean obviating the geoeconomic debate, which will be the focus of section 2.2. It does however force us to see these political tensions within the broader context of capital accumulation and complicates the geopolitical narrative of East vs. West by showcasing how within shipping, state policy is pervasive, and all states attempt to influence the global shipping network. The next sub-sections explore these debates.

Taking capital accumulation as our initial point of departure, both globally but particularly in China, suggests that the rise of 'new' state capitalism is associated not with the rise of authoritarian political systems seeking control over populations (Bremmer 2010). Instead, it reflects a necessity for the state to come back in to salvage national economic competitiveness amid pressures from global capitalism. So, the rise of statism in the last decade in the form of international state-owned enterprises, such as national energy firms, the growth in sovereign wealth funds and other state-led investment forms and state-permeated economies is a necessary way to remain competitive in the global economy (Alami and Dixon 2021; Alami et al. 2022; Nölke et al. 2019; Nölke et.al. 2015). This political economic perspective pushes away from views based on old grand geopolitical narratives seeing the rise of statism as an East vs. West dichotomy and an 'eastern' threat to the liberal world order (Alami and Dixon 2020a; Babic 2023). So-called liberal and coordinated market economies in the West (Hall and Soskice 2001), are also experiencing a rise of state involvement in the economy (van Apeldoorn and de Graff 2022; Babic, Dixon and Liu 2022; Wood et.al. 2023; Silverwood and Berry 2023; Henderson et.al. 2021).

Acknowledging the complex set of relations between states and markets, the 'new' state capitalism agenda has flourished over recent years (Alami and Dixon 2020a; Alami and Dixon 2020b)[23]. New state capitalism does not refer purely to the generic features of the national political economy, as other debates surrounding state capitalism do (Kurlantzick 2016; Hilferding 1940). In current forms of state capitalism, neither all markets nor price mechanisms are controlled by the state[24]. The use of the concept state capitalism in some academic circles has been critiqued for its monolithic approach to the nation state and the vilification of any state action in and on markets (Alami and Dixon 2020a; Peck 2019). While some research identifies a significant difference between state capitalism and liberal states (Naughton and Tsai 2015; Bremmer 2010), state capitalism studies within economic geography attempt to study the phenomena from a broader perspective of capitalist accumulation that transcends methodological nationalism (Alami and Dixon 2020a; 2020b; 2021). The comparative capitalism literature, which seeks to identify institutional specificities via the comparative properties of an ideal model of state/capital relations, has fallen into a similar methodological nationalist trap (Peck 2019; Brenner, Peck and Theodore 2010). The notion that coordinated and liberal market economies have separated markets from states has been contested (Peck 2019; van Apeldoorn, de Graff and Overbeek, 2012). As van Apeldoorn and colleagues (2012) argue, the neoliberal order also encompasses state strategies of market dominance. Rather, the concept of state capitalism in this dissertation, following Alami and Dixon (2020a; 2020b; 2021), is used to explain how the structural pressures of global capitalist development incentivize states to actively shape markets to mitigate pressures on their national economies. For Alami and Dixon (2020a; 2020b), the phenomena of new state capitalism calls for an understanding of the relationship between states and markets that is territorially contextual and goes beyond simplified binaries of "state-market" or "East-West".

The analysis of state capitalism in this dissertation is based on the notion of variegated state capitalisms. Variegated capitalism is a concept within primarily economic geography seeking to highlight variation and contextuality in capitalist development (Peck and Zhang 2013). Variegated capitalism focuses on "the relational analysis of unevenly developed multi-scalar and polymorphic capitalism" (Zhang and Peck, 2016: 55). It is based on an analysis of capitalist development as

[23] This section is adapted from Chapter 4.

[24] State capitalism has been a loaded term since its original theorization in the 19th century by Marxist scholars, see Sperber (2019) for the historical origins of the term.

historically dynamic, constantly adapting, geographically shifting, and marked by a tendency to accumulation crises (Brenner 2004; Harvey 2015).

Variegated capitalism has been applied to China extensively (see Zhang and Peck 2016; Mulvad 2015), given its decentralized governance framework of interprovincial competition, leading to experimentation and a diversity of economic policies to achieve GDP targets (Ang 2016; Ye 2020). The broader point is a critique of a static vision of capitalist development with comparative institutional analysis at the national level and between countries, such as the varieties of capitalism approach (Lim 2014; Rolf 2021; Zhang and Peck 2016; Mulvad 2015). This is particularly the case since globalization has broken down the primacy of national economies vis a vis their connection to global production networks and global circuits of capital (Yeung 2016; Brenner 2004). The Chinese political economy in its variegated form and multiplicity of regional economies is firmly embedded in the global economy and affects global capitalist development and vice-versa (Mulvad 2015; Chen 2022).

States are now more vulnerable to global competition, have less control over the economy within their borders, and do not hold all power in national economies (Alami and Dixon 2021; Chen 2022; Tickell and Peck 1995). At the same time, states (or their sub-regional forms) can strategically couple with global capitalism through global production networks and embark on leap-frog economic development (Yeung 2016). It is here where an exploration of the role of the state in developing, supporting, and steering shipping and transport markets intersects with the conditions for capital accumulation and the reason why, this dissertation argues, successful states and regions in the global economy are presaged by their position in the global shipping network and the development of strong logistics industries.

It is also why all states shipping and logistics regulations[25] aim at controlling flows in their territory and beyond. These policies are in part based on historical antecedents and the state's position in the global shipping hierarchy. The ship was the first investment object where investors pooled risk (Braudel 1992 [1982]). In the past, the role of the state in the transport and shipping industries has been to either securitize and delimit or stimulate the expansion of spaces of circulation (Campling and Colás 2021). Historically, this was achieved through militarized

[25] This could include: cabotage rules, shipbuilding subsidies, port infrastructure development etc.

colonial expansion in close collaboration with chartered companies. The preferred method of expansion of maritime trade relied on military conquest and colonialism, in collaboration with chartered companies, representing the state as colonial masters of maritime trade (Campling and Colás 2021). The state also motivated the expansion of global trade through improvements in naval engineering and subsidizing the construction of trading vessels in local shipyards, particularly in the UK (Campling and Colás 2021: 47-50). As such, shipping, capitalism, and the modern nation state co-evolved, and their relationship persists as an underlying structure of the global economy. Maritime industries and the modern nation state formed in tandem, and this relation continues as a backbone of the global economy.

The relationships between states and global shipping have been explored before by Susan Strange (1976) and Alan Cafruny (1987), who sought to understand the relationship between hegemony and state power and the commercial and maritime relations of states in the global economy. They did so by focusing on Soviet and Japanese challenge to American maritime hegemony based on improvements in shipbuilding and naval capabilities. The post-WWII American-based 'freedom of the seas' shipping regime remains hegemonic (Strange 1976; Cafruny 1987), even though Japan, and later South Korea, managed to partially supplant the West as leading centers of commercial shipbuilding. These challengers were assisted by strong state support (Chida and Davies 1990; Amsden 1992). For example, in South Korea, the motivation to enter shipbuilding was driven primarily by a need to find markets for a growing steel industry and was part of a broader strategy of entering into labor intensive heavy industries (Amsden 1992). As the South Korean shipyards were becoming competitive, many challenges arose. To ensure the shipyards a market for their ships, the South Korean government established a protectionist policy whereas only Korean tankers could import oil into Korea, driving the growth in South Korean shipping firms (Amsden 1992: 269-291)[26].

In China, similarly to the experiences showcased of other late industrializers, the development of infrastructure and a general heavy industrialization drive has been state driven, even in its internationalization. China did this through the mobilization of large central and regional SoEs in the construction and transport sector and

[26] Similar strategic considerations drove the Japanese shipbuilding industries, who modernized during the Meiji restoration, but were then destroyed in the second world war. After the war, the Japanese government prioritized commercial shipbuilding as an engine of growth (Chida and Davies 1990).

through cheap financing from its development banks. In a period of 40 years (1978-2018) and necessitated by the massive growth in trade, 2,311 new berths for large vessels were built in coastal ports (Aritua et.al. 2022). This strategy increased general productivity in the Chinese economy, while also creating ripple effects in supplier industries such as steel and cement and large amounts of employment. Recently, relationships between states, global production networks and shipping and logistics have come back into focus (Coe 2020). The rise of China's commercial and naval shipbuilding industry and the Belt and Road Initiative, which has aided the internationalization of Chinese shipping SOEs, are both key developments in bringing the maritime state back into focus.

In the critical geography literature on maritime transportation and logistics, the state has been conceived as competing to secure the circulation of goods and the openness of strategic trade routes (Cowen 2014; Khalili 2020; Campling and Colás 2021). For example, that containerization and the Vietnam War went hand in hand reveals the leading role of the US in establishing the contours of the global trading system (Chung 2019). In jockeying for hegemony, and through the ties between shipping and logistics and war and politics, states play a central role in underpinning the global flow of commodities through different means. This includes SOEs that carry goods, large contracts and subsidies provided to national carriers, and the securitization of international spaces for the benefit of states' trade and geopolitical interests (Flint and Zhu 2019; Zhang 2017). This dissertation contextualizes the wave of 'new' state capitalisms within ever-changing global maritime regimes and strategies of maritime states.

Within this 'new' state capitalisms literature, the Belt and Road Initiative has received significant attention (Su and Lim 2023; Szabó and Jelinek 2023; Liu and Lim 2023). Containerization and ever larger vessels, in addition to the improvement in digital communications, have sharply reduced the physical component of trade costs, pushing production towards new geographical frontiers (Levinson 2006). This new structure of the global production system has created new sets of economic stakeholders that organize production systems (Gereffi, Humphrey and Sturgeon 2005) and reanimated the politics of trade flows.

The Belt and Road Initiative, and its maritime component, the Maritime Silk Road Initiative, have been targeted by retractors as a way for China to exert influence on other countries receiving investments from Chinese capital (Kardon and Leutert 2022). This position has however been extensively challenged by researchers who

have studied the plethora of projects that encompass the BRI (Jones and Hameiri 2020; Blanchard 2018; 2020; Gong 2019). The BRI, as a symbol of China's form of capitalism, is a negotiated and relational phenomenon within multi-scalar politics and processes (Chen 2021; Cheng and Apostolopoulou 2023). As discussed above, Chinese state capitalism is not constituted at the level of the state, but rather via a broad array of agencies and firms, who's actions are broadly framed by national and regional policies. Therefore, Chinese BRI strategies are best conceived as a variegated state capitalist strategy (Brenner Peck and Theodore 2010; Peck and Zhang 2013; Zhang and Peck 2016). A wide array of policies can fall under the framework of variegated state capitalism, and states use all of these polices to navigate structural pressures from global capitalist competition in support of capital (Alami and Dixon 2021).

Today, with the Chinese PLA Navy ever more globally present (Kardon and Leutert 2022), these dichotomies of a global but nationally embedded industry are more politically salient. This is not the first time that a challenger to the maritime hegemony of the West in organizing flows has arisen. Similar challenges to the maritime hegemony and changes in the global shipping industry have occurred in the past (Strange 1976; Cafruny 1987; 1995). Primarily these challenges came in the form of improvements in physical infrastructure in trade and the significant growth of shipbuilding and naval innovation by the Soviets and Japanese. Although Japan, Taiwan and later South Korea surpassed the US and Europe as leading centers of commercial shipbuilding, these countries ultimately did not challenge the global shipping regime. This may be different in relation to China, not only in terms of the global shipping regime, but the overall structure of power in the global political economy. Therefore, this dissertation also explores the geopolitical components of the internationalization and expansion of Chinese maritime industries, and it does so in theoretical terms through geoeconomics and infrastructural power.

2.3. Geoeconomics and infrastructural power: the control of global maritime infrastructure

A focus on how 'new' state capitalism plays out in a variegated way at multiple scales (both sub-national and global) does not imply a complete disregard for the analysis of the national scale. Many claims as to the complete lack of nation state authority in their economies due to the power of global capital and the end of inter-state competition at the international level due to an interdependent global economy

have been exaggerated (Zhang and Peck 2016; Rolf 2021). The state, and political contestation between states, remains a powerful mechanism in molding the geographies of capitalism (Zhang and Peck 2016; Chen 2022; Apostolopoulou 2021) Even the opposite to a pacification of international politics through more connected economies has tended to occur. Even as new forms of capitalism emerge and construct new opportunities for capital accumulation that provide economic power to new political and ideologically different stakeholders, the traditional inter-state system and its power relations have been brought back to the center of capitalist development (Rolf 2021). Connectivity to the global economy and the creation of interdependencies between stakeholders, has led to the weaponization of interconnectedness (Farrell and Newman 2019). Others have also coined this the rise of 'economic statecraft' or 'techno-nationalism' (Weiss and Thurbon 2020; 2018) or the comeback of 'great power competition' (Alami et.al 2021; Schindler et.al. 2021). This dissertation focuses on geoeconomics and 'geoeconomic competition' to understand how competition within markets translate to inter-state competition (Cowen and Smith 2009; Babic, Dixon, and Liu 2022).

In their edited volume, Babic, Dixon, and Liu (2022) extend the nature of geoeconomics beyond the 'admixture of the logic of conflict with the methods of commerce' (Luttwak 1990: 19). They do this by extending the logic of geoeconomics to a multiplicity of non-state actors and to geoeconomic cooperation, rather than pure competition. In that way, we can see geoeconomic strategy as a way for states to increase global market control and as a projection of state power abroad (Cowen and Smith 2009; Babic, Dixon, and Liu 2022; Khalili 2018). In terms of transportation, Cowen (2014:8) highlights how the logistics revolution disrupted geopolitical logics, where the logics of power, authority, and sovereignty were territorially bounded in the nation state, with geopolitics framed as a creature of the system of nation states. The advent of global logistics saw the rise of geoeconomics, and the reshuffling of space by market logics and transnational actors (including the state) in a global network of flows (Cowen 2010; Cowen and Smith 2009). Thus, a non-state centric geoeconomics does not take state power out of the equation, rather it creates opportunities to see the many ways in which geoeconomics plays out through different actors (Babic, Dixon, and Liu 2022; Moisio 2019).

Importantly, this way of studying geoeconomics, goes beyond the reduction of all concerns to national security concerns, as many examples exist of deviation from core security concerns (Babic, Dixon, and Liu 2022; Cowen and Smith 2009). The question of course is how this relates to the case of China, as a determinant of

geoeconomic power plays. Chinese transnationally growth was possible thanks to the opportunities provided by globalization (Babic 2023). As an integrated actor within the globalized economy, change in its geoeconomic strategy and mode of integration into the global political economy has ripple effects in other states' geoeconomic calculations. New foreign policy initiatives and domestic reforms in China are geared towards remaking global production networks and continue to recenter the global economy towards China, while shifting the economy from being the factory of the world and towards a post-industrial era of higher local consumption (Mulvad 2015; Babic, Dixon, and Liu 2022; Chen 2022).

The geoeconomic lens shifts the focus to a wider range of stakeholders and allows recognition of development as variegated and multi-scalar, linking inter-state competition to the question of the role of the state in capital accumulation (Schindler et.al. 2021; Schindler et.al. 2022; Babic, Dixon, and Liu 2022). Differing geopolitical calculations in for example Europe (more appeasing) and the US (more confrontational) can lead to other geoeconomic conflicts between otherwise perceived allies (Babic, Dixon, and Liu 2022). Thus, the shift in the political economy of China and its foreign policy, has created tensions with the hegemonic power, the US, with geoeconomic consequences for the global political economy. To deal with the consequences of a rising China, other states have also actively intervened in the economy to remain competitive, in a form of emulation of Chinese policy, while the China model has also been a source of inspiration for other developing countries, and this continues to accelerate (Alami and Dixon 2021).

As such, the 'China model' and its foreign policy projects infrastructural power in the global economy, as it reshapes global flows and re-imagines state-capital relations in the global political economy.

Michael Mann (1986: 70) defined infrastructural power as the "the capacity to actually penetrate society and to implement logistically political decisions".[27] This type of infrastructural power conceptualized in the '*Sources of Social Power*' denotes a centralized and territorial notion of infrastructural power, focused on the infrastructures of rule over sovereign territories, both physical (roads) and abstract (trade regulation and other standards). At the same time, Mann (1993: 59) denotes that "infrastructural power is a two-way street: it also enables civil society parties to control the state, as Marxists and pluralists emphasize", remarking on the

[27] This section is adapted from chapter 5.

possibilities for civil society, broadly understood, to hold infrastructural power over states (Mann 2008). Considering this dialectic of holding of infrastructural power by both state and non-state actors, Khalili (2018: 914-915) defines infrastructure power and the actors who hold it as:

> "…the authority and power to forge and maintain the assemblage of practices, discourses, physical fixtures, laws, and procedures necessary for the government of subjects and citizens, including their economies. This power emanates not only from bodies associated with states […], but also from overlapping institutions and organizations, whether parastatal or ostensibly private, that serve to bolster this power."

In the end, Khalili (2018:915) claims "The ultimate aim of infrastructural power is the (re)production and enforcement of capitalist relations". Khalili (2018) then posits that this infrastructural power can also address the policing and control of circulation beyond national boundaries. Limiting or controlling the supply of goods and creating scarcity or maintaining an umbrella of alternative supply routes and sources in the circulation of commodities, are means through which both states and private organizations exert infrastructural power (Khalili 2018). Strong states have managed to create shipping regimes of accumulation, which until now were focused on freedom of the seas and ever-growing trade (Strange 1976; Campling and Colás 2021; Chua et.al. 2018). This may be no longer the case as the rise of China both in terms of economic size and technological capacity challenges western hegemony in the global economy. Thus, the geoeconomic calculation of open trade and open seas, and the mode of integration of circulation spaces as a way of fueling global trade may be changing.

Infrastructural power as a concept in international political economy has been primarily used to discuss financial and monetary flows and the hegemony of the US dollar. This research identifies the power of the US in global monetary policy as a form of infrastructural power, as it governs the rules of trade and provides the US with a tool to exclude states from global trade (Schwartz 2019). More recently Braun and Gabor (2019), Braun (2021) and Braun et.al. (2021) have deployed infrastructural power to discuss the role of financial centers and central banks in global capitalism as well as the expanding role of asset managers in global finance and the power they exert in shaping the norms and rules in the global economy more broadly. Green and Gruin (2020) focus on the role of these global financial centers in mediating the internationalization of the RMB. RMB internationalization was

aided by these financial centers (Green and Gruin 2020). However, their actions were constrained by the infrastructural power of these financial centers being interlinked with US dollar hegemony. Similarly, Gabor (2021) discusses how wall street as a private wielder of infrastructural power in the financial system is creating a new governance form of state de-risking. Here, where the state absorbs the risks in financing particularly projects in developing countries and so encourages the financialization of economic development. This body of research provides specific examples of how actors employ infrastructural power in financial flows as a powerful tool of states and firms to coerce action.

Cowen (2014) and Khalili (2018) demonstrate complementarity between geopolitics and geoeconomics by showing how military encampments created by the US military for the invasion of Iraq became international logistics hubs for flows of global commodities and now exert geoeconomic influence in the gulf. Khalili (2018; 2020) argues that during the transition of the Middle East into oil producing states and their integration into global capitalism, the US Army Corps of Engineers acted both as the security arm of the US and influenced the region through the transformation of the physical shipping infrastructure in the Arabian Peninsula. The control of capitalist circulation is crucial in geoeconomic competition. It not only transforms the spaces where competition over infrastructure occurs, such as in the Arabian Peninsula or more recently in South-East Asia and Africa. The use of shipping expansions as a geoeconomic tool also effects material circulation in far-flung areas.

Open seas and continuous trade growth have been touted as crucial for liberal explanations of global peace and economic growth. Liberalization of trade in the 1980s and 1990s and openness to trade was assumed to reduce political conflicts between states. During this liberalization (and financialization), particularly in the West, infrastructure investment fell out of vogue both at home and abroad. This was because of its perceived high risk, high required capital expenditure, which in turn reduced maintenance and expansion planning for global infrastructure (Schindler and Kanai 2021). The liberalization push also expanded to the global south, where ideas of thin institutions and open markets took over, while global lending institutions reduced lending for infrastructure (Rodrik 2006). Large infrastructure projects were considered risky and inefficient, offering low returns. However, a contradiction arose, as the increased trade in commodities without an equally ambitious growth in infrastructure spending created a massive infrastructure gap in developing countries. This void was filled by major surpluses from trade growth

from Asian stakeholders (first Japanese and to a lesser extent South Korean and Taiwanese surpluses). In more recent years, China's massive surpluses have been reinvested into infrastructure (Klein and Pettis 2020: 101-131). Infrastructural investment has been used by China in the last decade as a mechanism to stave off economic downturns (Klein and Pettis 2020).

Given the relevance of shipping to state power, states under capitalism participate in geoeconomic competition for the control of the resources of circulation (Kardon & Leutert 2022), but from very different starting points and with very different strategies. The strategies pursued to amass infrastructural power vary depending on relations between the state and capital. Neoliberal states or state capitalist states represent different categories of state relations with markets, but both attempt to hold and project infrastructural power. In the end the goals remain similar, in that infrastructural power is exerted at home and abroad to fend off the crisis tendencies of capital and secure a beneficial material flow within the global economy (Khalili 2018).

2.4. Conclusion: The Chinese challenge to the global shipping regime

This chapter has addressed how a return of the state in the shipping industry forces us to conceptualize new state-capital relations in the global political economy amid shifting structures of global capital accumulation and geoeconomic competition. It has done so in five theoretical movements. Firstly, section 2.1 discussed the overaccumulation crisis of the Chinese political economy and then in the second theoretical movement, conceptualized the spatial, and logistical, fixes seeking to resolve these accumulation crises. For the third theoretical movement, section 2.2. argued that the mode of governance in China is best conceptualized as variegated state capitalism, while also being related to the more broadly East Asian mode of economic governance, implying stronger state intervention to materialize the logistical fixes conceptualized in section 2.1. Finally, section 2.3. realized the last two theoretical movements. The section discussed how capitalist imperatives translate into geoeconomic competition and the shifting of state strategies in the global economy. This is then operationalized as the infrastructural power of shipping infrastructure, both in expanding the relations of capital globally, but also legitimizing the Chinese model of economic development abroad.

Empirically the dissertation unfolds these five theoretical movements by studying multi-scalar and variegated capital accumulation processes both internally within China and externally in international ports where Chinese firms invest and interact with the broader shipping industry and other states. In doing so, the dissertation speaks to the literature on 'new' state capitalism about the pervasiveness of the state in the shipping industry and the ways in which state investments in shipping are used to fend off capital accumulation crises, albeit with geoeconomic consequences.

Part two pushes forward this theoretical discussion within the three articles that comprise the core of the dissertation showcasing how the different theoretical angles of the dissertation are operationalized.

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Part 2. The articles

This second part presents the core of the dissertation, the three articles each tackle a particular sub-question and provide their own contribution in answering the main research question presented in chapter 1.

The three articles, and their publication status are as follows:

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Chapter 3. Logistical fixes and China's spatial division of logistics integration – in search of economic rebalancing?

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Abstract

This article analytically foregrounds the role of logistics, infrastructure, and the transformation of capitalist circulation as an integral component of Chinese capitalism's changing developmental paradigm. Based on a historical-comparative study of two developmental paradigms, the Open Door Policy (1978-2013) and New Normal (2014-2021), we argue that two layered logistical fixes have shaped Chinese capitalism, while driving unequal regional economic development. During the Open Door Policy, the initial logistical fix was centered around the coastal region as an export platform and logistical hub. Consequently, networked spaces of capital accumulation were formed based on the transfer of raw materials and intermediary inputs from the inland to the coastal region, followed by their processing into marketable commodities valorized in global export markets. Following China's transition to the New Normal, the emergence of a new spatial division of labor between the coastal and inland regions necessitated a new logistical fix. This new logistical fix is notably centered around the inland region as a logistical hub, from which capital circulation and infrastructural linkages with the neighboring Asian and the coastal region are being built.

3.1. Introduction

An integral aspect of China's meteoric rise has been the role of the Chinese state in spatial planning, which has molded the locational geographies of Chinese capitalism, facilitating its progressive integration with the global economy. The successful integration of the Chinese economy with global export markets has been predicated on the spatial division of labor between its coastal and inland regions, as the former was targeted for the selective integration with global supply chains based on its comparative advantages in terms of productivity, capital, and human resources (Yang, 1991; Fan, 1997). To this end, the Chinese Communist Party (CCP) mobilized Chinese state institutions "to channel socioeconomic assets and advanced infrastructure investments" (Brenner, 2004, p. 214) to the coastal region to promote a favorable investment environment for transnational capital and rapid industrialization, while leaving the inland region to serve in an auxiliary role through its supply of raw materials and labor.

This article argues that the missing component to the story has been so-called logistical fixes, which have bolstered this spatial division of labor between the coastal and inland regions. Logistical fixes denote transformations in the structure of logistical markets and infrastructure as a remedy to processes of under- and over-accumulation of capital (Danyluk 2018). The Chinese state has implemented such logistical fixes through targeted infrastructure-led development plans, underpinned by multiple rounds state spatial strategies (Brenner 2004), which secured the logistical integration of the coastal and inland regions within global and regional production networks. Based on this logistics integration, the coastal region has consolidated its global competitiveness based on its complementarity with the inland region. In essence, the role of logistics and infrastructure-led development has represented an integral and enduring feature of the successful integration of Chinese capitalism with global production, circulation, and consumption processes (Schindler and Kanai, 2021).

We examine the formation of these coastal-inland logistical fixes through a comparative-historical study, distinguishing between two developmental paradigms. First, the initial developmental paradigm based on manufacturing-led development and export-oriented industrialization under the Open Door Policy (1978-2013). Second, the current developmental paradigm premised on post-industrial development and a rebalanced focus between exports and domestic consumption under the New Normal (2014-2021). During both periods, logistical

fixes have been based on the enforcement of a *spatial division of logistics integration* between the coastal and inland regions, reflected in the shifting logistical requirements and location of logistical hubs in response to the changing accumulation imperatives of the Chinese economy.

During the Open Door Policy, the logistical fix was centered around the coastal region as a global export platform, as the developmental paradigm was focused on developing external infrastructural connectivity to buttress its export-led model. Inland, regional corridors such as the Yangtze River Delta and the Pearl River Delta were formed to facilitate the supply and distribution of raw and intermediary inputs to the assembly processes on the coast. In parallel, the coastal region formed infrastructural linkages with global supply chains through large-scale port and shipping system to facilitate exports.

In contrast, the New Normal has ushered a new logistical fix that has transformed the inland region into a secondary manufacturing center parallel to the coastal region, requiring its own logistical hubs. As the coastal region has undergone a process of industrial upgrading and innovation-driven development, the inland region has undergone a renewed phase of industrialization due to the industrial transfer of low-cost manufacturing industries from the coastal region. The new accompanying logistical fix has been shaped by state spatial strategies, namely the Dual Circulation policy (guonei guoji shuang xunhuan). The changing spatial division of labor has renewed the focus of Chinese policymakers in strengthening China's system of domestic circulation to support its shift towards consumption-based growth (Liu and Ouyang, 2020). Furthermore, these logistical forms of integration reflect the growing centrality of the logistics industry, featuring as one of the major service industries of China's uneven post-industrial transformation. In this context, the inland region serves a twin role as the manufacturing and distribution hub that supports domestic circulation and the global consumption of commodities. The focus on internal and external connectivity reflects a "double opening" strategy, geared towards transforming the inland region into a logistical hub connected to the coastal region (internal opening) and neighboring regions in Asia (external opening).

The remaining article proceeds as follows. The following section reviews the extant literature on China's coastal-inland gap and how this gap resulted from the dynamics of spatial planning and governance, foregrounding the need to rebalance the Chinese economy. The third section theoretically outlines the (capitalist) state's

role in the production of state spaces and the formation of logistical fixes, which has formed an integral albeit contradictory part of China's developmental and policy paradigms in its attempt to rebalance. The fourth section proceeds with the historical-comparative study, which is partitioned into two periodizations: (a) the initial manufacturing-led and export-driven phase (1978-2013) and (b) the New Normal and post-industrial phase (2014-2021). The final section offers concluding remarks and problematizes the broader theoretical research program on logistical geography.

3.2. The coastal-inland gap and the challenges to spatial planning and governance

Spatial planning and governance have constituted "recursive spatial tool[s]" (Lim, 2014, p. 242) harnessed as part of China's developmental paradigm. Policies directed at molding Chinese spaces of capital accumulation have both supported its rapid economic ascendance but simultaneously also harbored contradictory tendencies threatening its political and economic stability. Its exceptional rise during the Open Door Policy as the leading destination for global outsourcing of assembly-oriented manufacturing (Chan, Pun, and Selden, 2013) did not evolve evenly but was instead characterized by a coastal-inland gap. Based on a ladder-step transition theory (tidu tuiyi lilun), the central government promoted the selective development of the coastal region, as part of the so-called Coastal Development Strategy in 1988, which was chosen to 'get rich first' as part of its gradualist strategy for development (Fan, 1997; Lim, 2016). The coastal region was transformed into an attractive destination for foreign investments through the formation of special economic zones (SEZs), which extended foreign enterprises investor privileges such as tax rebates, access to land and infrastructure, and favorable import-export policies (Zeng, 2010).

Its developmental paradigm during the Open Door Policy was consequently built around a strategy of manufacturing-led development and export-oriented industrialization, buttressed by the spatial division of labor between the coastal and inland regions that mobilized the latter to support the rapid integration of the former into the global economy. This spatial division of labor entailed massive investments into the functional specialization (Massey, 1995) of (a) the coastal region in assembly-oriented manufacturing, and (b) the inland region on its auxiliary role through the provision of raw materials, intermediary inputs, and heavy machinery funneled primarily through state-owned enterprises (Ang, 2016). A set of

preferential policies were designed to facilitate this spatial division of labor, such as by channeling migrant workers from the inland to the coast by way of the household registration system (hukou) and pricing primary goods (e.g. agricultural goods, raw materials) at a state-mandated lower price through the so-called 'scissors gap' (jiandaocha), which buttressed the global competitiveness of the coastal region (Fan, 1997; Weber, 2021).

While the spatial division of labor between the coastal and inland regions secured the rapid growth of the Chinese economy by enhancing the comparative advantages of the coast, it also gradually fomented an overaccumulation crisis that culminated with the global financial crisis in 2007. An overaccumulation crisis is a crisis of surplus of capital or labor that cannot be viably combined into locally profitable investments and consequently valorized (Harvey, 2001). Harvey (2015) frames this foundational crisis of the capitalist mode of production as the challenge of maintaining the continuous flow and integration of capital accumulation between production, circulation, and consumption. Due to the impulse of expansion and the continuity of flow as a condition for capital's existence, "capital must circulate continuously or die" (Harvey, 2015, p. 73).

In the context of China, the overaccumulation crisis was catalyzed by the overinvestment in industrial capacity to support its role as a global export platform, which made its economic engines reliant on external demand to absorb surplus capital. China's developmental paradigm was thereby premised on a pathological co-dependence with the United States and European Union, which accounted for around half of China's exports in 2007 (Palley, 2006; Jessop, 2013). Global exports had to expand in lockstep with China's economic growth to avoid creating an excess capacity, which was impossible in the long-run due to its rapid economic growth. The build-up of excess capacity was estimated to afflict 75% of China's industrial sector during the height of China's export-oriented industrialization strategy prior to the global financial crisis in 2007 (Rajan, 2006). A notable characteristic of the industries suffering from excess capacity was its prevalence among state-owned enterprises centered around heavy industries such as aluminum, cement, and steel (Szamosszegi and Kyle, 2011), which were geographically concentrated in the inland region because of its functional specialization as an auxiliary support to the coastal region.

While the problem of overcapacity was left relatively unnoticed during the 1980s, the CCP mobilized multiple responses and reform packages in the late-1990s as

structural imbalances started to manifest (European Chamber, 2016). These policies can be interpreted through the lens of Harvey's (1982) outline of potential solutions to overaccumulation crises through the institutionalization of so-called spatial fixes, whereby the state attempts to temporarily "fix" the problem of surplus capital or labor by (a) expanding or creating new markets to increase effective demand, or (b) relocating and exporting them to more profitable sites of investment that can absorb idle capital. Consequently, the CCP initiated a sequence of spatial restructuring plans in the late-1990s, which targeted respectively the western provinces (1999), central provinces (2003), and northeastern provinces (2004). These policy initiatives would partly redress the overaccumulation crisis by increasing effective demand, such that the excess capacity in heavy industries could be absorbed in a round of infrastructural investments and the build-up of the inland industrial base (Tian, 2004). However, the overaccumulation crisis did not fully resolve because such investment plans were only temporarily deferring the problem, rather than solving the underlying structural imbalances structurally linked to the spatial division of labor between the coastal and inland regions.

As the spatial restructuring plans and the attempt to institute a spatial fix in the 2000s did not resolve the overaccumulation crisis, Xi Jinping's administration promulgated the New Normal in response to multiple consecutive years of declining growth following the global financial crisis (Zhang and Chen, 2017). The faltering economic performance signaled the exhaustion of China's manufacturing-led development and the vulnerability of export-oriented industrialization that is excessively dependent on foreign demand and global export markets. Finally, the CCP acknowledged the need to rebalance its growth engines and change its developmental priorities (Rolf, 2021), catalyzing the managed transition toward the so-called New Normal. Instead of the initial strategy to increase demand to offset excess capacity, the New Normal aimed to reconfigure the spatial division of labor between the coastal and inland regions and instituting a new spatial fix premised on rechanneling investments into new industries and sectors to redress the overaccumulation crisis.

Two major policy agendas underpinned this reconfiguration. First, the Made in China 2025 (MIC2025) national strategy targeted the coastal region for industrial upgrading centered around service-based and innovation-driven development (Ma *et al.*, 2018). Second, the central government started to redirect investments as part of the 12th FYP (2011-2015) to the inland region to relocate manufacturing activities that had become too expensive on the coast toward the less developed

inland region (Guppy and Zhiming, 2010; Chang *et al.*, 2013; Yang and Gallagher, 2017). The effects of this policy can be seen in the increasing pushback against low-end manufacturers in coastal provinces, leading producers to relocate to inland provinces such as Anhui, Jiangxi, Hubei, Hunan, Henan, and other underdeveloped interior regions. Consequently, the New Normal has entailed a new spatial division of labor based on the functional specialization of the coastal region in high value-added activities (finance, design, and research and development), whereas the inland region has transformed into a new hub of manufacturing (He and Wang, 2012).

3.3. Logistical fixes: the production of the networked spaces of capital accumulation

The extant literature has focused on the management of the overaccumulation crisis through the lens of spatial fixes and the spatial integration of industrial development between the coastal and inland region. However, a missing component to this body of literature is how this integrated circuit of capital has been buttressed by circulation processes that have linked the resource frontiers and production nodes through infrastructural networks and logistical modes of integration (Schindler and Kanai, 2021). Danyluk (2018) introduces the cognate concept of a 'logistical fix' as a multi-faceted spatial fix, which seeks to analytically recenter the importance of logistics and infrastructure-led development in facilitating the seamless integration between different moments of the capital accumulation process. As the capitalist mode of production is a generalized system of commodity production, exchange, and consumption, capital can only valorize itself and pursue its endless expansion if it can continuously produce and exchange commodities for a surplus. To this end, logistical systems ensure that capitalist enterprises can source input factors and circulate finished commodities to end consumers through various logistical infrastructures such as transportation networks (roads, railways, waterways, ports), distribution centers, and storage facilities.

The concept of logistical fixes thereby highlights how the profitability of capital is mediated by circulation processes, as the surplus value can be realized at different points of the capital circulation process and becomes distributed among different fractions of capital. As Harvey (2015) clarifies:

> *The capitalist producer who organises the production of value and surplus value does not necessarily realise that value. If we introduce the*

> *figures of the merchant capitalist, the bankers and the financiers, the landlords and property owners, and the taxman, then there are several different locations where the value and the surplus value can be realized (Harvey, 2015, p. 126).*

However, the role of circulation capital is notably omitted from this explanation as a source of surplus creation. We argue that this omission is because the concept of capital circulation is in the extant literature used ambiguously and often conflates two different meanings. The first usage is in the 'abstract' sense, referring to the metaphorical interface and transition between different analytically distinct moments of capital accumulation, such as how commodities are produced and exchanged between different stages of production until they finally reach the end-consumer and become valorized. The second usage refers to the 'literal' sense of circulation, that is, the physically embedded processes of logistics, infrastructural linkages, and modalities of transportation that facilitate the physical movement of tangible commodities (and intangible commodities such as finance) between different moments of capital accumulation. Thus, whereas the extant literature on spatial fixes refers to capital circulation in the former sense (as an abstraction) to metaphorically represent the integrated circuit of capital underwriting the capitalist mode of production, the concept of logistical fixes foregrounds the latter meaning of the embedded processes of capital circulation as a source of value creation.

3.3.1. Instituting logistical fixes in China through state spatial strategies and the spatial division of logistics integration

Logistical fixes can be examined as the products of state spatial strategies. The state mobilizes these state spatial strategies to mold the locational geographies of capital accumulation to secure the "organizational coherence, functional coordination, and operational unity" (Brenner, 2004, p. 88) between spatial planning and the accompanying developmental paradigm. Logistical fixes concretely manifest in the form of the built infrastructural environments, such as urban ensembles, communication networks, transport connectivity (roads, ports, bridges, and railways), industrial zones, and logistical parks. The Chinese state aims to create a favorable environment in the local economy as a form to attract global investments by molding the domestic locational geographies of capital accumulation. From this vantage point, logistical fixes can be construed as targeted investments into infrastructural networks and logistical modes of integration to create seamless, integrated, and networked spaces of capital circulation, facilitating the expansion,

profitability, and preservation of capital. Based on this state-capital nexus, a reciprocal relationship is thus formed between capital and the state, as they coordinate where to target large-scale investments into infrastructure and logistical systems to mutually realize their interests to stimulate the conditions for profitable spaces of capital accumulation (van Apeldoorn, de Graaff and Overbeek, 2012).

The importance of logistical fixes and the logistics integration of production is a result of the logistics revolution in the 1960s based on the advancement of innovation in telecommunications and transportation, which have resulted in a space-time compression, mitigating spatiotemporal constraints on global production (Carnoy and Castells, 2001; Cowen, 2014; Danyluk, 2018). There has effectively been a shift from a vertical production system toward a horizontal and technical division of labor, resulting in "the dual process of separating the functions of conceptualization from those of execution, and of the increasing fragmentation of the tasks of execution" (Massey, 1995, p. 32). Flexible modes of production have enabled corporations to 'slice up' their supply chains into discrete, modularized productive segments, enabling corporations to diversify their allocation of productive processes horizontally to the most competitive localities (Buckley, 2011).

From this vantage point, logistical fixes form the networked spaces of capital accumulation linking this complex chain of internalized and externalized production processes through "planning, coordinating and controlling material, parts and finished goods from suppliers to the customer" (Stevens, 1989, p. 3). Logistics matters for the valorization of commodities because, whenever capital is in circulation, the process of valorization is practically interrupted. To this end, logistical processes realize their value by providing circulatory services (such as storage, customs clearance, transportation, packaging, cargo management, and tracking) to reduce circulation/transit time by efficiently coordinating supply and demand. For Chinese capitalism, the state has mobilized logistical fixes through state spatial strategies by adapting, atomizing, accelerating, expanding, and improving logistical processes to support the continuity of capital accumulation.

In parallel to the spatial division of labor between the coastal and inland region, we can introduce the cognate concept of *spatial division of logistics integration* to signify the differential logistics integration of regional spaces with production networks and value chains. The relevance of the concept lies in the distinction between the respective functional specialization of the coastal and inland regions,

exerting different logistical requirements for their participation in processes of capital circulation. Different forms of functional specialization require different capabilities in logistics and infrastructure, depending on the externalized and internalized relations that regional economies form with regional and global production networks. Regional advantages can thereby be strengthened through a spatial division of logistics integration, despite the constraints of scarcity of resources of a developing economy, by leveraging the interactive complementarity between regional economies with (relatively) limited but specialized patterns of infrastructural development (Coe *et al.*, 2004). More concretely, the interplay between the absolute and comparative advantages between regional economies is realized through the targeted and selective development of localized transportation networks and logistical in the coastal and inland regions, which produces functionally differentiated patterns of infrastructural development that jointly reduce costs or increase the competitive of one regional economy, possibly at the expense of the other.

3.3.2. The contradictory and layered processes of spatial governance and logistical fixes

The Chinese state is constituted by a vast bureaucratic network of overlapping policy jurisdictions that is not monopolized by a single body of interests. Its system of governance is thus characterized by factionalism (Pye, 1981), as different bureaucratic agencies and central and local governments act in their self-interest and come into conflict with each other (Florini, Lai and Tan, 2011). More concretely, these factionalist interests have led to the apt description of China as a system of fragmented and regionally decentralized authoritarianism, from which emerges conflictual (vertical) central-local dynamics on the one hand, and (horizontal) inter-agency and inter-provincial competition on the other (Lieberthal and Oksenberg, 1988; Landry, 2008; Xu, 2011).

From the perspective of infrastructural development and logistical planning, we can observe a high degree of fragmentation and disjointed policymaking *horizontally* as they are formulated and issued by two planning agencies: (a) socioeconomic development plans authorized by the National Development and Reform Commission (NDRC) and (b) Ministry of Transport (MOT) involved in managing China's transport and logistical geographies. An integral aspect of spatial planning of logistical fixes is encapsulated in its Five-Year Plans (FYPs) formulated by the

NDRC, which outline broad strategic visions for the future trajectory of China's development.

These two bureaucratic agencies operate across China's five-tier administrative hierarchy, for which long-term master plans are devised: provincial, prefectural, county, and township levels. As a corollary, spatial planning is also fragmented *vertically* as central and local governments have different scale-specific interests in the organization of state spaces as different spatial configurations can yield different distributive outcomes. Conflicts thus arises between the generalizing role of the central government to coordinate the structural coherence of the Chinese spatial economy and the parochial interests of provinces, and specifically between the coastal and inland regions, over the spatial division of labour.

Like spatial fixes, logistical fixes should thus be analyzed from a processual perspective because they are instituted and tendentially unstable processes (Polanyi, 1957). Logistical fixes can only temporarily defer or spatially displace the crisis tendencies of the capitalist mode of production by lowering costs, expanding markets, or increasing profitability. The stabilization of capital accumulation is thus always provisional and requires continuous re-stabilization that yields new contradictions that will, in turn, form the conditions under which future contradictions emerge (Jessop, 2008). From this perspective, past rounds of logistical and infrastructural development form the inherited geographies upon which new logistical fixes must be built. The institutionalization of new logistical fixes thus needs to address inherited contradictions and patterns of unequal development through new layers of logistical development and restructuring. The crisis tendencies that form the antecedents of successive rounds of logistical fixes can be categorized as either frictional or structural (systemic).

Frictional crises of logistical fixes refer to contingent shocks or disruptions, which can consequently disrupt logistical flows and lead to delayed supplies, higher costs, and lower profitability. Such vulnerabilities can be exemplified by instances in which circulation processes have broken down due to disruptions. For example, only in a 2-year period, logistical and supply-sided bottlenecks (because of the Covid-19 pandemic), accidents (the recent Suez Canal blockage), warfare (Russia-Ukraine war and disruptions to energy and food supplies), or labor conflicts (striking by Canadian truck drivers) have wreaked havoc on global supply chains. Scholars in critical logistics and geography have, in this connection, showcased the ample roles states play in ensuring the continued reproduction of circulatory

processes (Cowen, 2014; Campling and Colas, 2021). While such exogenous shocks can customarily be resolved relatively fast (Suez Canal blockage), they might occasionally trigger a systematic logistical restructuring or the formation of new logistical fixes altogether, such as the increase in re-shoring and near-shoring due to the Covid-19 pandemic.

Structural crises refer to systematic changes to the broader developmental paradigm, which exerts new logistical requirements for capital accumulation. The concept of developmental paradigms draws on regulation theory, which can be theoretically elaborated as the set of complementary institutional regularities and relations in production, circulation, and consumption that produce a coherent process of capital accumulation (Jessop and Sum, 2006). The assumption is that each developmental paradigm, exemplified by the Open Door Policy and New Normal, exerts differential functional and spatial demands on the bounded spaces of capital accumulation to secure its structured coherence in terms of the spatial organization of logistical development and integration. Consequently, every transition from one developmental paradigm to another upends inherited geographies of capital accumulation and creates moments of crisis (Massey, 1995). In this sense, to successfully move to its new developmental paradigm, China must reconfigure its prior logistical system while also dealing with frictional or structural crisis of its prior logistical fix. In the next sections the article will showcase the movement to the New Normal within the transformation of logistical fixes.

3.4. A comparative-historical analysis of China's logistical fixes

The comparative-historical analysis examines the logistical fixes that have accompanied the changes in the spatial division of labor between the coastal and inland regions during the Open Door Policy and New Normal. The analytical focus is on the layering of state spatial strategies and cumulative rounds of investments that have shaped the spatial division of logistics integration and the crisis within the two periods. The analysis also provides different domestic and international examples of logistical projects guiding the remaking of China's logistical geography for its new developmental paradigm. The methodological choice of periodizing Chinese capitalism is informed by earlier calls for new perspectives on China's changing developmental trajectory, which has either been fragmented or failed to materialize into a systematic research agenda. For example, Lin (2004) anticipated the significance of the shift toward post-industrial development, as he succinctly

posited that "the emergence of the tertiary sector as a main source of employment and a powerful engine for reorganizing urban land use and transforming the urban economic landscape raises new theoretical questions requiring a conceptual departure from the previous industrial-deterministic paradigm" (Lin, 2004: 18).

These prescient discussions were furthermore supported by signs of economic decline in the aftermath of the global financial crisis in 2007, after which the developmental and policy paradigm predicated on export-oriented industrialization, labor-intensive industries, and a low-wage labor regime had notably started to show signs of exhaustion (Yu and Zhang, 2015). Building on these problematizations, the following periodization distinguishes between two periods (see Table 1): the Open Door Policy (1978-2013) and the New Normal (2014-2021).

Table 3.1 Summary of two periods in the Chinese political economy

	Open Door Policy (1978-2013)		**New Normal (2014-2021)**	
Developmental paradigm	Manufacturing-led development and export-oriented industrialization		Dual Circulation policy based on both integration with global export markets and domestic consumption, fueled by processes of industrial upgrading and the strengthening of the tertiary sector	
The spatial division of labor and integration with global supply chains	**Coastal:** From assembly-based to full-package manufacturing models	**Inland:** Supply coastal region with raw materials and intermediary input factors	**Coastal:** Post-industrial development centered around service-based and innovation-driven industries connected to higher value-added activities in global supply chains	**Inland:** Manufacturing and logistical hub supporting the domestic and extra-regional integration of production networks with Southeast Asian neighbor countries
Logistical fix and spatial division of logistics integration	The insertion of the coastal region into supply chains and its transformation into a logistical hub and global export platform via large expansion of port infrastructure, supported by the secondary integration of its inland with the coastal region through a multi-modal transport network		Double opening strategy and spatial rebalancing that embeds the inland region as a new (secondary) logistical hub and corridor forming cross-connectivity between the coastal region and Southeast Asia through broad investments in logistics infrastructure	

The primary goal of periodizing Chinese capitalism into two phases is to identify the relatively durable spatial division of logistics integration that underpin each of the two periods. By tracing the historical development between the Open Door Policy and the New Normal, this article periodizes moments of capitalist development in the Chinese political economy and the layered development, through cumulative rounds of investments, of logistical fixes. To this end, the analysis draws primarily upon documents in terms of spatial and territorial development plans, Five-Year Plans (FYPs), and policy memorandums from the relevant state agencies mentioned in the preceding section (see Section 3.2) and quantitative data on the logistical investments and flows between China's coastal and inland regions from 1978 to 2021.

3.4.1. The logistical fix during China's Open Door Policy (1978-2013)

The spatial division of logistics integration between the coastal and inland regions has been shaped by two decisive moments during the Open Door Policy. The initial integration process was a catalyst for the development of external linkages of the coastal region, as it assumed the role of a global export platform premised on a so-called assembly-oriented model (Gereffi, 2005), through which production inputs and finished export commodities would circulate. The second moment in the 1990s onwards was the gradual upgrade of the coastal region into a full-package model that sought to increase the domestic content of its exported commodities. To this end, the coastal region started to form internal logistical linkages with the inland region, from which it would source raw materials and other intermediary inputs.

Logistical fixes extensively supported these processes to enhance the circulation of commodities in China to create the 'factory of the world' (Chan, 2012). The logistical fix underpinning the spatial division of labor between the coastal and inland regions involved a complex choreography of planning, implementing, and managing circulatory processes. We can unpack the implications of this articulation of logistical and infrastructural development by examining the two dimensions of infrastructural connectivity: (1) the external circulation between the coastal region and the global economy, and (2) the domestic circulation and logistics integration between the coast and inland regions.

The coastal region as an export platform and logistical hub

During its initial integration phase with global production networks in the 1980s, China was embedded in a captive relationship with global supply chains

characterized by "the mere assembly of imported inputs, typically in export-processing zones" (Gereffi, Humphrey and Sturgeon, 2005, p. 91). It required China to import primary inputs such as raw and semi-finished materials to facilitate the assembly and production of intermediate and final products for exports (Taglioni and Winkler, 2016). For this reason, its coastal competitiveness was conditional upon the connectivity of the region to its import suppliers, which rendered its coastal infrastructure and its logistical performance a key success criterion for attracting global lead firms (Cattaneo *et al.*, 2013). In the 11th FYP (1981-1985), the focus was on "placing both ends outside" (liangtou zaiwai), rendering the coastal region a self-sufficient modular insertion into the global economy (Yang, 1991).

A primary barrier to securing the integration of the coastal region was its weakly developed logistical infrastructure, which posed high costs in terms of transit times and other circulation-related costs that were temporarily offset by low labor costs. In short, the provision of adequate infrastructure that meets the functional requirements of global supply chains was "a necessary precondition for regional economic activities" (Shen, 2002, p. 111). Consequently, the Chinese state opted to implement SEZs as a form of state spatial strategy, which would serve as the logistical mode of integration to secure the modular insertion of the coastal region. SEZs functioned as logistical fixes, albeit only in a fragmented and embryonic form, premised on the targeted development of critical transport infrastructure in the coastal regions to facilitate connectivity with global export markets. By creating spatially bonded zones where regulation was minimized and political oversight was targeted at expediting export processes, SEZs could attract foreign investments into the local infrastructure to offset some of the total costs (Shen, 2002). Upon introducing the first SEZs (Zhuhai, Shenzhen, Xiamen, and Shantou) in 1981, they accounted for nearly 60% of total foreign direct investment in China (Wong, 1987). Over the next 20 years until the global financial crisis, the initial five SEZs would employ 2% of China's labor force, but account for 22% of its total merchandise exports (Zeng, 2010). As a form of logistical fixes, SEZs ensured that the flow of commodities was made seamless by promoting the rapid and efficient turnover of raw commodities and intermediary inputs into products and back to consuming countries (Cowen, 2010; Chua *et al.*, 2018).

High logistical efficiency was crucial for the strategic coupling between global markets and the coastal region because its competitiveness as an export-processing zone was contingent on its connectivity, turnover rate, delivery time, and transportation cost, all of which were important in managing the time and cost

sensitivity of global supply chains. For example, surveys on business suppliers report that transport infrastructure ranks among one of the most severe "national supply-side constraints […] affecting their ability to enter, establish or move up" (Cattaneo *et al.*, 2013, p. 25) global production networks. In response to these functional requirements, the Chinese central government had since the 1990s regarded transport infrastructures as a major policy priority. Infrastructure has been emphasized successively in China's FYPs as part of its broader state spatial strategies to mold the logistical geography around the coastal region. Following the introduction of the coastal development strategy in 1988, which effectively extended the favorable policy regime of SEZs to the entire coastal region, this resulted in an explosive growth in sea transport, with total port throughput in China going from 6,3 mio. TEU in 1990 to 89,4 mio. TEU in 2005 (Rimmer and Comtois 2009: 44). Due to the insufficient capacity to serve the growing levels of cargo throughput, the 1990s ushered in a large wave of state fixed-assets investments into transportation and telecommunications, which reached as high as 30% in 1998 (Démurger *et al.*, 2002).

The gradual accumulation of physical infrastructure in ports, processing plants, storage facilities, and distribution centers rapidly accelerated in the late 1980s due to the joint investments by the Chinese state and foreign capital. From the government's perspective, both the central and coastal provincial governments proactively made targeted investments in the coastal region (Zhang *et al.*, 2007). For example, the central government outlined in the 10th FYP (2001-2005) a plan to build "135 deep-water berths and reconstruct 45 existing ones for China's seaports [to] increase port handling capacity by 20 million tons and the container handling capacity by 16.5 million TEUs" (Goh and Ling, 2003, p. 901)[28]. Meanwhile, due to their increasing fiscal capacity from their booming economy, coastal provinces had the means to make further local transport investments (Zhang *et al.*, 2007). Between 1979-1990, the coastal region received 91% of all foreign direct investments (Enright, 2016), contributing to initial rounds of investments jointly with the Chinese state to strengthen the port infrastructure.

Between 2000-2010, seaport investments grew between 15.7 to 23.7%, resulting in a massive port capacity expansion (Song and van Geenhuizen, 2014a). The rapid improvement in the port infrastructure of coastal China meant that the share of

[28]TEU is a measure used in the Container shipping market, meaning a Twenty Foot Equivalent Unit, referring to the size of a standard container which is 20 feet long.

global ports connected (directly or indirectly) with China reached a peak value of 38.5 by 2007 (Wang and Ducruet, 2014). The successful spatial division of logistics integration favoring the coastal region was reflected in the port statistics. Since the early 2010s, China has had seven out of ten of the largest ports in the world measured by container cargo throughput (Alphaliner, 2021), reflecting China's rapid integration with the world's container ports and sea routes post-2001 after their admission to the WTO.

The coastal-inland logistics integration and processes of domestic circulation

Efforts to stabilize the circulatory processes of Chinese capitalism reached a high point in March 2001, alongside China's admission into the WTO, where the State Economic and Trade Commission issued the policy plan "Several Opinions on Accelerating the Development of Modern Logistics" (State Economic and Trade Commission, 2001). The heightened focus on logistical development reflected China's transition from a captive model of export processing "to a more domestically integrated and higher-value-added form of exporting broadly known in the industry as full-package supply" (Gereffi, Humphrey and Sturgeon, 2005, p. 91). For this reason, the efficiency of domestic logistical linkages – in the form of efficient transportation and access to locally sourced inputs – became crucial for securing China's deepened integration with the global economy. China turned to the inland region to reduce its reliance on global export markets for intermediate and raw materials to locally source them instead.

More than 20 coastal and inland provinces and municipalities issued local development plans for expanding their logistics systems to facilitate the implementation of this logistical fix, catalyzing a logistical boom and infrastructural consolidation in the 2000s (K. Li, 2014). A logistical chain is only as strong as its weakest link, meaning that reliance on the inland region could potentially jeopardize the competitiveness of the coastal region. To strengthen domestic infrastructural linkages, highways and railways became policy priorities and recipients of massive rounds of targeted fixed-assets investments by the state (Shen, 2002). The coastal-inland logistical fix aimed to link resource frontiers between the coastal and inland functional regional territories by introducing two regional state spatial strategies: Yangtze River Delta (YRD) and Pearl River Delta (PRD). Each regional plan served as a state spatial strategy surrounding core metropolitan regions, namely Guangdong (YRD) and Shanghai (PRD), around which the networked spaces of

capital accumulation between the coastal and inland regions would pivot (Li and Wu, 2013).

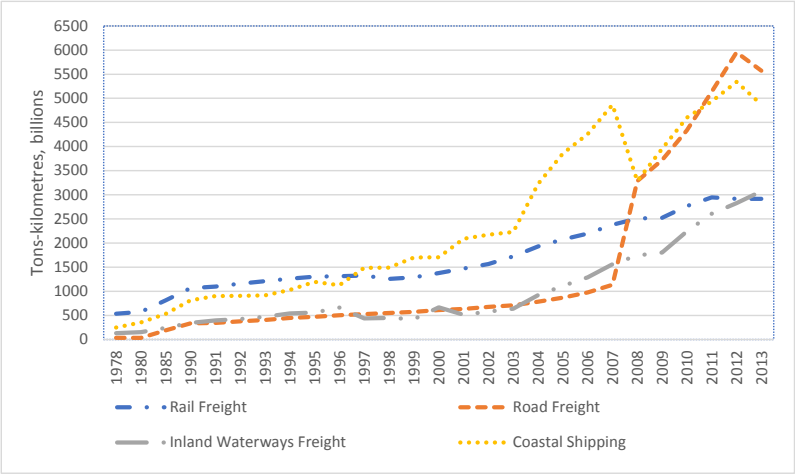
The YRD and PRD suffered from severely underdeveloped infrastructure as the regions were not prioritized for development during the pre-reform period (Shen, 2002). For example, the PRD only had two railway sections linking Guangzhou to Beijing and Kowloon in Hong Kong, and highways were interrupted by cross-cutting rivers that required ferry transportation (Shen, 2002). These barriers to domestic circulation imposed prohibitive costs on transportation. From this perspective, the two regional corridors offered the "institutional solution to overcoming the hurdles of capital accumulation" (Yeh and Xu, 2010, p. 22) by expanding and upgrading the inland region and its potential for logistics integration. More concretely, this institutional solution implied directing people and material inputs to the coastal region to secure its continued reproduction of accumulation.

The PRD and YRD were respectively introduced in 2004 and 2005, both of which involved the visions of the provincial and central governments in promoting regional connectivity between coastal and inland provinces. To this end, the regional strategies would implement a comprehensive network of transport corridors that would crosscut the Chinese continent from East-to-West (PRD) and South-to-North (YRD). Both strategies featured state intervention, which promoted coordinated investment efforts to build up locational assets in the coastal region (Wu, 2015).

Consequently, throughout the 2000s, investments into inland infrastructure and logistical capacity were significantly improved to strengthen the material flow of parts, energy sources, and raw inputs (see Figure 1). Raw material inputs were "located mainly in the west while industrial centers [were] based on the east coast" (Démurger *et al.*, 2002, p. 103). Therefore, their primary mode of transportation was by railway freight across long distances, in high volumes, and at low frequencies. The distribution of intermediary inputs and sourcing of turnkey inputs between the coastal and inland regions involved a more complex networked circulation process, which required coordination between distribution centers, "characterized by low volume and high frequency deliveries" (Coe, 2014) primarily transported through road freight transportation. Consequently, whereas train freight volume had increased by 100% between 2000-2010, road freight soared by 700% during the same period. While national coastal shipping increased rapidly at the beginning of the 2000s following the WTO admission, inland (road, rail, and inland waterways)

freight gradually eclipsed its coastal counterparts in the latter half of the 2000s as the regional connectivity of PRD and YRD regional corridors was enhanced.

Figure 3.1. Freight transport growth in China (1978-2013)



Source: (OECD, 2022a)

The limitations and contradictions of China's logistical fix during the Open Door Policy

The logistical fix between the coastal and inland regions enhanced the domestic circulation processes by linking the resource frontiers to an expanded multi-modal transportation network. Towards the end of its industrial phase in 2013, upwards of 70% and 95% of input factors of foreign and domestic manufacturing firms were sourced locally (World Bank, 2013), showing the successful upgrade of China's participation in global supply chains to a full-package supply model. The logistical fix was premised on a spatial division of logistics integration that promoted the hierarchical centrality of the coastal region as a logistical nodal point in transport networks and the subordination of the inland regional node. Consequently, the inland region had practically "no export and import logistics function for the international marketplace" (Wei and Sheng, 2018, p. 54) as it had to channel them through the logistical channels of the coastal region. However, while the unequal logistical development between the coastal and inland regions succeeded in rapidly integrating China with global supply chains, it also exhibited multiple fault lines in

the form of two contradictory tendencies: (a) logistical overaccumulation as a structural crisis, and (b) logistical underdevelopment as a source of frictional crisis.

China's logistical system had been plagued by inefficiency and overcapacity, most clearly reflected in China's total logistics cost, which reached nearly 20% of its GDP by 2011 (Jiang, 2014; Yu and Zhang, 2015), exceeding an average of 10% on the global level (OECD, 2022c). The immediate consequence of the targeted logistical and industrial development of the coastal region was that it stimulated foreign direct investments that would otherwise not be profitable, which consequently triggered an 'amplification effect' through the scale of activity. The amplification effect was triggered by the formation of infrastructure and auxiliary services, which spurred pro-competition effects that, in turn, rendered the coastal region attractive for further investments (Taglioni and Winkler, 2016). Due to the positive feedback mechanism between infrastructure development, economic growth, and local fiscal revenue, local governments in the coastal region would limit their investments to localized infrastructure and logistics.

These inter-provincial rivalries yielded inefficient logistical planning and investments, resulting in the dispersion of the external connectivity of Chinese ports, meaning that geographically closed ports in China would compete against each other for cargoes (Wang and Ducruet, 2014). Because each coastal province wanted to attract foreign investments and steer logistical flows, provinces would compete against each other rather than embrace a diversification of ports. For example, due to the excessive local competition between North and South China, the two coastal areas were barely connected to each other (measured in flow linkages) prior to the 2000s, leading to the parallel emergence of polarizing regional hubs around Tianjin, Shanghai, Qingdao, and Xiamen (Song and van Geenhuizen, 2014b). These inefficiencies are illustrated by how Shanghai built its own Yangshan Islands deep-water port, rivaling its neighboring Beilungang port in Ningbo and the Taicant and Nantong ports in Jiangsu, effectively steering potential cargo away (Wu, 2016). Another example of overaccumulation in infrastructure has been in international airports, as two were built in the PRD that could "handle 280 million passengers a year, nine times of the total population in the region" (Shen, 2002, p. 112).

The overaccumulation of infrastructure in the coastal region created a source of crisis as the incapacity to absorb the fixed capital investments would potentially lead to a devaluation of local assets and a potential destabilization of local economies

(Harvey, 2003). The massive investments into coastal infrastructure also posed the risk of contagion, as local governments financed them through non-local capital. The concerns about an overaccumulation crisis escalated in the aftermath of the global financial crisis in 2008, as freight transported declined precipitously while inland freight continued to increase rapidly (see Figure 1 above). The contradiction of logistical overaccumulation in the coastal region dovetails with the parallel problem of logistical underdevelopment in the inland region.

To address the logistical underdevelopment of the inland region, the government-initiated rounds of redistributive and spatial rebalancing policies in the 2000s, which were intended to mitigate the destabilizing effects of this spatial division of labor between the coast and inland regions. Between 2000 and 2004, fiscal expenditure on infrastructure investments and fiscal transfers to the inland regions moved between 54% and 69% of total national expenditure, showing a strong redistributive impetus favoring the inland (Grewal and Ahmed, 2011). However, despite these massive efforts to counteract the uneven logistical development between the coastal-inland regions, the inland region "has continued to fall behind the national average in respect of most outcome indicators" (Grewal and Ahmed, 2011, p. 179).

These conclusions cast doubt on whether these redistributive state spatial strategies could break the circular and cumulative causation pattern engendered by the initial logistical fix connecting the coastal regions to the global economy. Notably, the rapid growth rates experienced by the inland region were primarily concentrated in three major cities: Chengdu, Chongqing, and Xi'an. The rest of inland China would largely remain considerably below the national average double-digit growth rate. Despite the redistribution in inland infrastructural investments, they were by no means sufficient to offset the massive infrastructural gap between the coast and inland due to the preponderant size of the latter, which accounted for 90% of China's territorial mass (Lemoine *et al.*, 2014).

Studies have shown that road investments have translated into significant productivity gains for the coastal region but have been nearly zero for the inland region at the beginning of the 2000s (Li, Wu, and Chen, 2017). These observations confirm the so-called 'empty roads' hypothesis, suggesting that the new roads that have been built have not been organically integrated with China's logistical system and have thus been underutilized. The expansion of coastal infrastructure thereby only yielded "limited spillover effects from growth centers in the coastal areas to inland regions" (Hao and Wei, 2010, pp. 183–4). The logistical underdevelopment

of the inland region consequently gave rise to frictions in the circulation process, which jeopardized its logistical efficiency and price competitiveness. In response to these trends, the MOT would, on multiple occasions throughout the 2000s, comment that there was a "lack of organic connections" between the coastal and inland regions and the "development of multi-modal transportation networks was deficient" (Ministry of Transport, 2002, 2005, 2007 authors' translation) despite the massive investments into transportation networks. In conclusion, the regional advantages realized by the coastal region from its interactive complementarity with the inland region have thus only been one-sided, as the spatial division of logistics integration primarily served the regional competitiveness of the coast. The next sections will showcase further attempts by the Chinese state to remedy this situation as it attempts to shift to a new developmental paradigm.

3.4.2. The new logistical fixes under the New Normal (2014- 2021)

Following the 2008 global financial crisis, Chinese capitalism sought to rebalance the structural foundations of its developmental paradigm by reducing its reliance on export markets for economic growth by increasing domestic demand. A catalyst for this structural rebalancing towards a strengthened domestic market and the localization of high-tech industries has been the global backlash against Chinese businesses, for example, the US ban on companies selling high-tech equipment to Chinese company ZTE Corp (Reuters, 2018). These external pressures prompted the push for self-reliance in the production of semiconductors. In response to these broader geopolitical trends, the NDRC reasoned in a communication brief that "China's export advantages and participation in the international industrial division of labor are facing new challenges, and the New Normal of economic development is a manifestation of this change" (People's Daily, 2016 authors' translation). The culmination of this structural rebalancing was the official launch of the Dual Circulation policy in 2020, codifying the diversification strategy aimed at lowering the overdependence on global export markets and, in combination with the MIC2025, promoting the localization of production and strengthening domestic consumption.

The Dual Circulation policy has functioned as a complementary state spatial strategy to the new spatial division of labor between the coastal and inland regions, based on selective industrial upgrading of the former and the industrial transfer of manufacturing activities to the latter. While the MIC2025 initially designated the inland region as a manufacturing center, the Dual Circulation policy attempts to

increase its role as a logistical hub. The inland region would thus become the center for logistical systems and services, facilitating the manufacturing and internal (domestic) and external (extra-regional and global) circulation of commodities. The logistical prioritization of the inland region dovetailed with the policy agenda of the 12th FYP (2011-2015), which called for resolving the structural crisis of logistical overaccumulation in the coastal region and frictional crises of logistical underdevelopment in the inland region inherited from its prior logistical fix.

First, the logistical overaccumulation in the coastal region has been mitigated by steering the logistical investments and competition away from the oversaturated coastal region. Instead, the inland region has become a secondary logistical hub, realized through a so-called double opening strategy that promotes the deepened integration of the inland region with the coastal region (internal opening) and its neighboring Asian cross-border regions (external opening) through institutional and infrastructural linkages (Summers, 2013). By creating new regional spaces of capital accumulation centered around the inland region, new logistical flows rebalance the mode of logistics integration of the coastal port infrastructure through their enhanced connectivity with dry ports and inland waterway transportation.

Second, transforming the inland region into a logistical hub has also sought to address its underdevelopment by redirecting circulation processes towards the inland region and prioritizing inland logistics (Xinhua, 2021). The 13th FYP (2016-2020) introduced the National Comprehensive Three-Dimensional Transportation Network Planning Outline to modernize and renew logistical infrastructure along the YRD and PRD regional corridors. The policy priority has been to promote closer integration between China's well-developed coastal maritime infrastructure with inland transportation such as inland waterways, highways, railways, and airports to create the organic connections it lacked. Organic logistical connections have been more likely to develop based on the new spatial division of logistics integration. The inland region no longer only serves an auxiliary function of supplying the coastal region with raw materials and intermediary input factors but has instead undertaken a more substantive function in circulation. Consequently, these new targeted investments in the inland regions have thus reduced the risks of frictional crisis as the regional economy grows.

The following section foregrounds two dimensions of infrastructural connectivity to understand the logistical fixes under the new normal and its accompanying spatial division of logistics integration: (a) the internal opening between the coastal and

inland regions to domestic circulation and the heightened importance of third-party and retail-consumer logistics; and (b) the external opening between the inland and Southeast Asia through the Belt and Road Initiative.

The inland region as a logistical hub facilitating domestic circulation.

In the post-financial crisis stimulus plan, the CCP issued massive infrastructure development plans equivalent to RMB1.5 trillion targeted at enhancing logistical efficiency and prioritizing the development of existing logistics resources while supporting the linking-up of fragmented logistics infrastructures (Qin, 2016). However, the new logistical fix centered around the inland region has also foregrounded new modes of logistics integration to facilitate domestic circulation centered around the inland region. These policy measures intend to redraw the infrastructural topography of Chinese state spaces to support China's new developmental paradigm and the parallel growth of circulation capital. Whereas the previous focus was on expanding coastal seaports, the new spatial division of logistics integration has been spearheaded by public and private logistics actors that have invested heavily in inland waterways.

To meet inland logistics demands, container transportation by inland waterway has grown since the financial crisis, growing a year-on-year average of 11,1% between 2007-2019 (OECD, 2022b). The rapid growth is exemplified by the Shanghai International Port Group (SIPG) investments in the YRD, with six logistics infrastructure and transport firm acquisitions in Chongqing, Taicang, Wuhu, Yueyang, and Yibin between 2011 and 2017 to expand handling, storage, and transportation capacity (Notteboom, Yang and Xu, 2020). Alongside the 13th FYP, the central government issued the Plan of Comprehensive and Vertical Transport Corridor on the Yangtze River Economic Belt, emphasizing the utilization of inland waterways as transport nodes and international logistics channels, which will form a transport network for major riparian cities surrounding the river. Most importantly, the plan emphasizes the need to "uncover the potential of domestic demand in the hinterland along the upper reaches of Yangtze River, [and] extend the space of economic growth from the coastal areas to the inland areas along the Yangtze River" (Wang, 2019, p. 59). Consequently, these policy visions translate into the large-scale plan of building another 320 inland berths and improving the inland waterways with a 4500 kilometers extension, thereby increasing the freight volume of the YRD trunk line by 300 million tons (Zhang *et al.*, 2019).

Besides inland waterway transportation, a broader change in the function of logistics and transportation must also be highlighted, as the shift towards domestic circulation and consumption alters the modalities and patterns of logistical flows (Jie and Lu, 2010). Retail-consumer logistics have been integral to accommodating the rise of a consumption-based economy and the shift towards domestic circulation. These development patterns entail a rise in high-frequency, low-volume freight, encapsulated by China's booming e-commerce industry based on web retailers such as Taobao, Tmall, and 360buy.com. The rise of e-commerce and retail-consumer logistics "display new forms of spatial organization, which are different from those of traditional industries" (Lu and Fan, 2010, p. 88) as commodities are no longer quickly processed for exports but require a flexible storage capacity to handle high-frequency transactions and rapid turnover. Consequently, highways have been the preferred mode of logistics integration between e-commerce platforms and end-consumers, for which reason road infrastructure investment has grown by a year-on-year average of 20% between 2008-2018 (OECD, 2022d). In comparison, railway infrastructure investments only increased by a year-on-year average of 7.9% during the same period and even declined for the first time in 20 years (OECD, 2022c).

Third-party logistical giants and online marketplaces such as Alibaba has reshaped Chinese logistical networks by building their own distribution networks and bringing in new logistics developments anchored in new technologies such as blockchain-enabled trade, as exemplified by the project between Alibaba and COSCO shipping (Paris, 2020). By building a so-called networked factory, Alibaba can match any need for producing goods directly with factories around China and provide all the logistical support to flexibly meet the demand for new goods (Butollo and Schneidemesser, 2021). These emerging logistical patterns centered around retail-consumer logistics are also reflected in the sharpened focus on logistics parks inwards, for which reason China is planning to build 150 logistics hubs by 2025, many of which will be situated in the inland region in the form of inland ports, cargo ports, and airports (National Development and Reform Commission, 2018). The proliferation of such logistical parks signals that logistics has become an integral service industry in supporting the logistical fix centered around the inland region. Logistical parks have functioned as favored modes of logistics integration, characterized by the spatial concentration of logistical establishments such as distribution centers, warehouses, and delivery depots.

Logistical parks can thus be construed as spatial planning tools to diminish the potential logistical frictions resulting from the logistical underdevelopment in the inland region through its functional specialization and targeted development of locational assets similar to the logic of SEZs (Li *et al.*, 2020). China's biggest warehouses have relocated to inland provinces such as Zhangzhou of Henan, Lanzhou of Gansu, and Chongqing (Qin, 2014), gradually becoming well-connected due to their strong integration with highways and rail networks. Much of these developments have been enabled by the large e-commerce firms taking center stage in the business of logistics. For example, JD Logistics started focusing on the platform's delivery needs in China but now has over 900 warehouses in China and moves cargo for third parties, showcasing the growth of the third-party logistics industry in China, following similar trends globally (McMorrow, 2021). In recognition of the growth of this third-party logistics industry, a new state-owned enterprise giant has been created for the government to intervene in the market (Jia, Bai, and Han, 2021).

The inland region and the Belt and Road Initiative facilitating external circulation.

Parallel to the logistical opening between the coastal and inland regions, the CCP has also directed investments to further improve external connectivity, particularly of the inland region, as part of the double opening strategy. Logistical fixes are being planned outwardly toward the Southeast Asian region for emerging inland manufacturing centers to be fully connected with regional logistical hubs and corridors. These corridor policies are chiefly about integrating the regional economies of the inland provinces into a well-functioning and -connected Asian regional economy.

The emphasis on a two-way transport network builds upon the existing policy priorities in the Belt and Road Initiative (BRI), which was formally codified as a policy plan by the NDRC in 2015 to diversify inland regional connectivity to the relevant cross-border export markets neighboring the inland region (Chen, 2021). The six constituent corridors of the BRI all pivot around the inland region but constitute a diversified, multi-corridor transportation network that extends into Asian neighboring countries. These investments in distributional capabilities go beyond the national territorial borders because the international development of logistical spaces is also crucial for the continued growth of the Chinese political economy.

For example, the China-Indochina Peninsula Economic Corridor (CICPEC), which builds upon the Greater Mekong Subregion project, has rapidly developed multiple cross-border transport corridors that link Yunnan with Laos, Vietnam, and Cambodia. These patterns of cross-border connectivity form the basis upon which inland provinces such as Yunnan and Guangxi have pivoted their provincial economies towards the Southeast Asian region in areas such as hydropower, tourism, environment, and agriculture (Su, 2012). However, the introduction of the CICPEC has also been fraught with scalar conflicts as Yunnan and Guangxi have issued competing state spatial strategies to promote their parochial interests by centering cross-border activities around their respective provinces. Yunnan introduced the Grand Route Way, proposing a network of railways and highways that linked the province to Vietnam (M. Li, 2014). In parallel, Guangxi initiated Pan-Beibu Gulf and the M-Strategy in 2006 that initiated multiple cross-border projects with Vietnam to create a multi-modal transport system, distribution centers, and border control checkpoints (Ikebe, 2013). In response to these scalar conflicts, the central government has designated each province differentiated functions in the CICPEC to improve coordinated development and avoid logistical overaccumulation and polarized centers of regional development (Chen, 2021).

3.5. Conclusion

This article has explored the role of the Chinese state in instituting logistical fixes to restructure the spatial division of labor between its coastal and inland regions. These logistical fixes have been shown to support the regional advantages of the coastal region and, later, the inland region through a spatial division of logistics integration, premised on the selective development of transport infrastructure and logistical systems. For Chinese capitalism, logistical fixes have constituted an integral part of its progressive integration with global production networks and the realization of value through circulation. During the Open Door Policy, the logistical fix was centered around the coastal region as a logistical hub and export platform. In contrast, the logistical fix during the New Normal has been centered around the inland region as a logistical hub and manufacturing center, which has aimed to improve its internal (domestic) connectivity with the coastal region and external connectivity with neighboring Asian countries, while also providing new spaces of capital accumulation for large e-commerce firms and global supply chains.

Past rounds of logistical and infrastructural development have formed the inherited geographies upon which new logistical fixes have been built. In combining the

concept of the logistical fixes to specific state spatial planning and patterns of capital accumulation in Chinese capitalism, this article showcases the state's role in securing the continued reproduction of capital and material infrastructure of global supply chains. The article has shown how these fragmented development patterns reflect a spatial division of logistics integration between the coastal and inland regions, which the Chinese state has actively enforced to support its developmental paradigms. Foregrounding China's fragmented and regionally decentralized governance, we showcased how the implementation of this logistical fix, and its accompanying spatial division of logistics integration has been a contradictory process fraught with frictional and structural crisis tendencies.

The comparative-historical analysis of the Open Door Policy and New Normal shows how logistical fixes can lower costs and increase the profitability of commodities during logistical circulation. Logistical fixes thus enter as part of the broader profit-making calculus of capital valorization, as they can move the profitability threshold through various logistical technologies, solutions, and modes of integration. At the same time, logistical fixes have shown to be fraught with contradictions and disruptive tendencies. The comparative-historical analysis highlights how the logistical fix during the Open Door Policy has produced overcapacity and underutilization, a structural crisis, through which the new logistical fix under the New Normal has emerged.

The logistical fix during the New Normal has similarly already showcased certain tentative crisis tendencies, in particular the external aspects of the logistical fix under the New Normal. The BRI has already run into several frictional crises as projects are stalling(Buckley, 2020), loans for investments are defaulting (Ruwanpura, Rowe and Chan, 2020), and geopolitical tensions around the project rising (Lee, Wainwright, and Glassman, 2018). The geopolitical tensions also pose the risk of a structural crisis, as the centering of the inland region as a manufacturing center and logistical hub is contingent upon the integration of the Asian regional economy. However, if the counteroffensive by the US and EU manages to pivot Asia away from further integration with China, the inland region might build up infrastructural capacity that cannot be absorbed in the long run. The threat of logistical overaccumulation and inefficiency might surface once again, although this time from the oversaturation of logistical infrastructure in the inland rather than the coastal region.

In anticipation of such potential risks, China has currently reduced Chinese lending for further projects and tougher restrictions on the direct investments from province outside of China (Narins and Agnew, 2022). However, the success of the inland regions of China as logistical and production hubs requires the continuous growth of external connectivity, so the question remains open-ended: can supply chains move inland? In addition, as Chinese manufacturing moves inland, foreign manufacturing in China has started questioning its dependencies on China as a global production engine, something which could put into question the whole Chinese developmental paradigm. This would necessitate yet another form of logistical fix, more internally focused for a less connected world.

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Chapter 4. State Capitalism and Spanish port development along the Maritime Silk Road

Abstract

With the rise of 'new' state capitalisms, control over transport infrastructure has returned to the forefront of competition in the global economy. This article investigates how different state capitalisms interact to enable economic developments in ports. It tracks the relationship between state-owned firms in the shipping and ports sectors through a case study of the port of Valencia in Spain and COSCO shipping group. The article identifies state capitalisms as variegated and relational to analyze the ways in which qualitatively different state capitalist dynamics interact at different scales. The article identifies two state capitalist dynamics which have been dominant in determining relations between Spanish and Chinese state capitalisms: 1) A *commercial dynamic* of maximizing Spanish ports profits by establishing new relationships with Chinese firms; and 2) an *expansionary dynamic* of increasing market share of Chinese state-owned firms in European shipping markets. These two dynamics are synergistic and have contributed to the competitiveness of Spanish ports and Chinese shipping firms by providing new capital to the port of Valencia and expanding the port's profile as a hub in the eastern Mediterranean, while also further solidifying COSCO's position in European shipping markets and its internalization and vertical integration strategy.

4.1. Introduction

Chinese state-owned enterprises (SOEs) in the transport sector are internationalizing, taking on the management of new marine ports and logistics hubs in port cities around the world. This is in part driven by the Chinese state's strategic foreign economic policies: The Belt and Road Initiative (BRI) and the Maritime Silk Road Initiative (MSRI), both launched in 2013[29]. These initiatives have been highlighted as examples of the rise of so-called 'new' state capitalisms (Alami and Dixon, 2020a). New state capitalism denotes a new relationship between business and state which, driven by structural pressures from global capitalism, seek to meet the challenge of competition in the transnational global economy. Faced with these structural challenges, capitalist states deploy multiple economic tools including state-owned enterprises (SOEs), sovereign wealth funds and a range of private-public partnerships to be competitive and steer markets (Alami and Dixon, 2020b). Drawing on economic, transport, and critical geography, this article identifies the different roles states play in facilitating and driving maritime transportation developments across Europe and analyzes the relationship between Chinese and Spanish forms of state capitalism through the case of the port of Valencia.

One prevalent view of state capitalism is as a corrupting force acting on market capitalism, implying a binary distinction and an inherent conflictual relationship between the two (Bremmer, 2010). This framing of state capitalism has been deployed against Chinese firms, producing specific geopolitical imaginaries, and a narrative of competition between a democratic and liberal western state and a state capitalist East (Bremmer, 2010; Alami and Dixon, 2020a). In the context of a perceived threat from the increasing participation of China in global markets, the narrative bolsters tougher policy positions towards the East (Alami and Dixon, 2020a). The new state capitalism literature attempts to move away from binary notions of the relationship between states and markets, where the economic actor is considered either a creature of the state or of the market (Peck, 2021; Alami and Dixon, 2020a). In doing, the literature calls for a deeper, geographical understanding of the complex relationship between states and markets.

An analysis of how state capitalism plays out reveals the different institutional and geographical contexts, historical dependencies, and economic dynamics that

[29] The first mention of the Maritime Silk Road from Chinese sources was in the state news media, China daily: https://usa.chinadaily.com.cn/china/2013-10/04/content_17008940.htm

underpin it. In the past, different forms of state capitalism have been used to establish industries[30]. Temasek in Singapore, Deutsche Bahn in Germany, the Norwegian state-owned oil company Equinor ASA (formerly Statoil) are recent examples of how the state continues to participate in capitalism in the shape of successful SOEs. This article explores state capitalism in the shipping and ports industry in Spain, specifically in the port of Valencia. In the shipping industry many leading firms are SOEs or have strong and long-term strategic partnerships with states (de Langen and Sornn-Friese 2020).

The 2008 global financial crisis and the on-going Covid-19 crises have highlighted the central role states play in the functioning of capitalism. While some argue that the looser the attachment to the state, the more successful a state capitalist firm is (Cuervo-Cazurra et.al. 2014), this article suggests the relationship is not so determined. The pervasiveness of state-market relations in the shipping sector provides a context for understanding the negotiated processes and outcomes in the interaction between different state capitalisms within capitalist markets. A variegated (Peck and Theodore 2007; Peck and Zhang 2013) and relational (Harvey 2006) understanding of state capitalisms allows us to see when its different forms generate synergies and conflicts.

This article investigates the relationship between different state capitalisms at different scales and across distant spaces within the shipping sector. It proposes a framework to understand the relationship between state capitalisms, focusing on *expansionary* and *commercial* dynamics. These dynamics are ideal typical and frame the predominant political and economic logics of the stakeholders involved in the port of Valencia. Although this article treats these two dynamics as distinct, they are intertwined and contain features of each other. The rise of Chinese state-owned shipping enterprises demonstrates the expansionary dynamics of the Chinese state, in its efforts to rebalance in its favor the architecture of global trade. Chinese SOEs, reacting to Chinese state strategies and the general economic dynamics of the shipping industry, have expanded internationally at a rapid pace. At the same time, to attract more cargo and become better connected to Chinese shipping networks, international ports like the port of Valencia have sought investment by Chinese SOEs to diversify terminal operations and remain competitive. This article argues that given the shipping industry's significant structural competitive

[30] Significant work has been carried out to explore this dynamic in East Asia, See Peck and Zhang (2013)

pressures, Chinese and Spanish state capitalist dynamics are synergistic. This synergy increases the competitiveness of Spanish ports vis-a-vis other ports in Europe and expands the presence of Chinese SOEs in Europe. Spanish and Chinese state capitalisms are synergistically aiding in the creation of a macro-regional logistics space in Europe that is both more integrated and connected, and more intensely competitive.

Making use of quantitative data - from Eurostat, COSCO shipping ports (CSP), the Valencia port authority and its parent company *Puertos del Estado* and the industry database Alphaliner - in order to track the Twenty-foot Equivalent Unit (TEU) throughput growth of the Mediterranean region, the port of Valencia and the CSP terminal in Valencia since its acquisition by CSP in 2017, allows for an assessment of the success of Port of Valencia's integration into the global shipping network and the growth of Valencia vis-a-vis other ports. The article supplements this quantitative data with qualitative material from 11 interviews with shipping stakeholders in Europe and Spain. Specifically, one interview with managers at the Spanish port management SOE *Puertos del Estado*, two with the Valencia port authority, and two with Spanish labor groups and dockworkers at the port of Valencia. Two interviews were conducted with European officials involved in the TEN-T and EU connectivity strategies, as their involvement in the broader European shipping markets also mediates COSCO's relations with the Valencia port authority. The remainder of the interviews encompass two shipping NGOs based in Brussels, the International Maritime Organization (IMO) and the International Dockworkers Council (IDC). The article also draws on extensive desk research, material from the specialized press and industry research and publications to triangulate the interviews and support the interpretation of the quantitative material.

The article proceeds as follows. The next section provides a theoretical framework around the idea of variegated and relational state capitalism, focusing on the two distinct state capitalist dynamics. Section three connects the state capitalist dynamics to port developments and introduces the range of actors involved in the port of Valencia. The fourth section addresses the growth and impact of Chinese shipping firms along the Asia-Europe trade routes. Finally, to showcase how state capitalisms interact and are relational, the case of COSCO's shipping business in Spain is explored in section five, highlighting its relationship with the Valencia port authority and other stakeholders surrounding the port, as well as outcomes in terms of the growth and diversification of shipping flows in the port of Valencia and the continued labor tensions between the port and its workers. In conclusion, the article

showcases how different state capitalisms interact and synergistically drive developments in the port of Valencia amid structural pressures from global shipping markets.

4.2. State capitalism in the shipping industry: commercial and expansionary state capitalist dynamics

Acknowledging the complex set of relations between states and markets, a 'new' state capitalism agenda has flourished in recent years (Alami and Dixon 2020a; Alami and Dixon 2020b). New state capitalism does not refer purely to the generic features of the national political economy, as other debates surrounding state capitalism do (Kurlantzick 2016; Hilferding 1940). In current forms of state capitalism, neither all markets nor price mechanisms are controlled by the state[31]. The use of the concept state capitalism in some academic circles has been critiqued by its monolithic approach to the nation state and the vilification of any state action in and on markets (Alami and Dixon 2020a; Peck 2019). In particular, the political science literature on state capitalism identifies a significant difference between state capitalism and liberal states (Zheng and Huang, 2018; Naughton and Tsai, 2015; Bremmer 2010). The comparative capitalism literature, which seeks to identify the comparative properties of an ideal model of state/capital relations, has fallen into a similar methodological nationalist trap (Peck 2019; Peck and Theodore 2007). The notion that coordinated and liberal market economies have separated markets from states has been widely contested (Peck, 2019; Van Apeldoorn, de Graff and Overbeek, 2012). As Van Apeldoorn and colleagues (2012) argue, the neoliberal order also encompasses state strategies of market dominance. Rather, the concept of state capitalism in this article, following Alami and Dixon (2020a;2020b;2021),

[31] State capitalism has been a loaded term since its original theorization in the 19th century by Marxist scholars. In particular, the question of who the state represents in its ownership of the market, and the influence on prices and competition mechanisms (Hilferding, 1940). Furthermore, the perception at this time was that state capitalism as a system directly replaced market capitalism, whether the state represented the bourgeoisie, as Engels theorized, or the proletariat, as Lenin perceived the term (Lenin, 1923[1971]). The decline of the Soviet Union led to the term being employed less, given the apparent triumph of neoliberalism and the retreat of the state. The astronomic rise of China and the financial crisis of 2008 re-popularized the concept. However, even in the early 1990s, the Asian tigers and their 'state-led' development showcased the continued relevance of the state in managing the economy (Amsden 1992). Nonetheless, the nature of this new type of state capitalism is different from discussions by Marxist scholars in the early 20th century.

is used to explain how the structural pressures of global capitalist development incentivize states to actively shape markets in order to mitigate these pressures on their national economies. For Alami and Dixon (2020a; 2020b), the phenomena of new state capitalism call for an understanding of the relationship between states and markets that is territorially contextual and goes beyond simplified binaries of "state-market" or "East-West".

The clear-cut distinction between state and market that some proponents of state capitalism have suggested is a false dichotomy (Peck, 2021). More relevant is the question of how state bodies articulate their roles and how these roles play out in a specific territory/urban region (see Olds and Yeung 2004). This helps to clarify state capitalism by locating it and exploring its interactions between its different manifestations (Alami and Dixon, 2020b). Indeed, all states, in certain sectors or at different times, are or can be state capitalist (Kurlantzick 2016). Territorial context, national strategies, regional development policies and geopolitical tensions determine the specific set of interactions between state capitalist states. Geopolitical tensions however do not fully explain the recent competition for control of commodity flows. Cowen (2014:8) highlights how the logistics revolution disrupted geopolitical logics, where the logics of power, authority, and sovereignty were territorially bounded in the nation state, with geopolitics framed as a creature of the system of nation states. The advent of global logistics saw the rise of geo-economics, and the reshuffling of space by market logics and transnational actors (including the state) in a global network of flows (Cowen 2010; Cowen and Smith 2009). Thus, a relational understanding of state capitalism is key in a translational global economy dictated by geo-economic calculations.

As Chen (2021) argues, the BRI, a symbol of China's form of state capitalism, should be understood as a negotiated and relational process between actors at different scales. Relationality means that social phenomena and actors' behaviors are co-constituted. This article shows how relational processes between state capitalisms can mitigate structural pressures from global shipping markets. Beyond the relational nature of state capitalism, the article conceives of state capitalism as variegated (Peck and Theodore 2007; Peck and Zhang 2013; Zhang and Peck 2016). Chinese and Spanish state capitalisms are variegated in that they are not constituted at the level of a unitary state but by a multiplicity of national and regional agencies, and a range of SOEs. At the same time, they are strategically framed by national and regional policies (Peck and Theodore 2007; Zhang and Peck 2016). States may use widely different policies to navigate the pressures emerging from geopolitical

and capitalist competition. Phenomena as varied as critical infrastructure, SOEs, sovereign wealth funds, and industrial policy have been packed together under the rubric of state capitalism (Alami and Dixon 2020b). Distinctions between state capitalisms are thus apparent not in the policies that define them nor in the institutions that push these polices, but in the identification of the strategic dynamics of a given state capitalist phenomena. Here, dynamics denotes an abstract idea of strategic intention rather than a rigid categorization of country sets or real types of country strategies (see Brenner et.al. 2010; Peck and Theodore 2007).

This article nominates these state capitalist dynamics as *commercial* and *expansionary* (Table 1). Although these dynamics are overlapping in certain characteristics and can work in synergy, certain key differences separate them:

Expansionary state capitalist dynamics are those in which state actors and firms, through both long-term planning and direct investments, attempt to reshape global markets and aggressively increase global market share. It is characterized by over-investment or investments considered high-risk by private investors. It is therefore often executed with support by policy banks and reflecting the imperatives of economic statecraft (Zhang, 2017). Investments may largely disregard profitability, at least in the short-term. This does not necessarily mean, however, that the investment will not succeed, particularly in the long-term. This type of dynamic is high-risk in terms of geo-economics, as it may be perceived as aggressive by regions and countries where investments are made. Although profitability is not a key parameter, prolonged under-performance may run the risk of compromising the aims of the state.

Commercial state capitalist dynamics are those in which there is little long-term planning or state-led strategic thinking surrounding the improvement of economic competitiveness. Commercial state capitalist strategies focus on creating state driven organizations that function efficiently and in a way that conforms to market expectations. The goal is to create strategies to increase efficiency and competitiveness by investing in new technologies and collaborating with other market leaders. In this case, expansionary and commercial state capitalism can work hand in hand. The development of investment and planning strategies is generally more decentralized and focuses on short-term job and profit creation, particularly in local or regional level SOEs (Li, Cui, and Lu, 2018). Given political tensions at the local scale, these commercial state capitalist strategies lead to over-investment in the face of competition. In the long-term this over-investment but market-

conforming dynamic creates a contradiction between capital and labor, where labor gets squeezed due to losses from over-investment and the imperative to maximize profits in the short-term.

Expansionary dynamics play directly in geo-economic competition calculations of states and work in long-term time horizons. Conversely, commercial dynamics work within short to medium term market opportunities and display opportunistic behaviors in relation to geoeconomics. While the market opportunities can come from the expansionary dynamics above mentioned, they can also arise from endogenous changes to regional growth models as well as a reaction to the expansion of geo-economic capital. Both expansionary and commercial state capitalist dynamics are spatially specific though they may play a role in tandem in explaining developments in different spaces and at different scales. The two dynamics and their main features are summarized in Table 1.

Table 4.1. Features of different relational dynamics of variegated state capitalisms

Dynamics	*'Expansionary' state capitalism*	*'Commercial' state capitalism*
Main Features	Strategic and long-term thinking around investments and commercial developments; high-risk investments to reshape markets and win market leadership.	'Market-like' but state ownership; short-term thinking on development and expansion; focus on low investment risk and maximizing profitability.
Planning	Varied, but in direct consultation between policy and economic actors. planning focused less on profitability and more on market share.	State consultation but focused on profitability and growth of the economic unit in the short term.
Investment	Over-investment driven by strategic drive for market share; largely backed by policy driven public funds.	Over-investment in the face of market competition but need for collaboration between a main public capital provider and other finance, given market-driven nature.
Risk	Geopolitical risk given strong government links; over-investment risk given ample capital opportunities; unprofitability risk due to other strategic priorities.	Commercial risks of underperformance; development risks due to lack of capital.
Contradictions	Capital – State: Although the general synergy between state and capital supports expansion, strategic synergies may collapse in the event of over-expansion once the economic actor becomes a leading agent in a market, with the need to preserve its position through efficiency, rather than market share.	Labor – Capital: State firms are generally perceived as having stronger labor conditions given their attachment to the state. However, the drive for these firms to be 'commercial' threatens earlier labor gains in terms of salaries and rights.

All states have specific shipping and logistics regulations aimed at controlling flows in their territory and beyond which partially determines its relations with global shipping markets. These policies are in part based on historical antecedents and the particular state's position in the global shipping hierarchy. The ship was the first investment object where investors pooled risk (Braudel 1992 [1982]). In the past, the role of the state in the transport and shipping industries has been to either securitize and delimit or stimulate the expansion of spaces of circulation (Campling and Colás 2021). Historically, this was achieved through militarized colonial expansion in close collaboration with chartered companies. As such, shipping, capitalism, and the modern nation state co-evolved, and their relationship persists as an underlying structure of the global economy.

The relationships between states and global shipping have been explored prior by Susan Strange (1976) and Alan Cafruny (1987), who sought to understand the relationship between hegemony and state power and the commercial and maritime relations of states in the global economy. They did so by focusing on Soviet and Japanese challenge to American maritime hegemony based on improvements in shipbuilding and naval capabilities. The post-WWII American-based 'freedom of the seas' shipping regime remains hegemonic (Strange 1976; Cafruny 1987), even though Japan, and later South Korea, managed to partially supplant the West as leading centers of commercial shipbuilding. These challengers were assisted by strong state support (Chida and Davies 1990; Amsden 1992) and in the context of this article, showcase a commercial state capitalist dynamic. Recently, relationships between states, global production networks and shipping and logistics have come back into focus (Coe 2020). The rise of China's commercial and naval shipbuilding industry and the BRI, which has aided the internationalization of Chinese shipping SOEs, are both key developments in bringing the maritime state back into focus.

In the critical geography literature on maritime transportation and logistics, the state has been conceived competing to secure the circulation of goods and the openness of strategic trade routes (Cowen, 2014; Khalili, 2020; Campling and Colás, 2021). For example, containerization and the Vietnam War went hand in hand reveals the leading role of the US in establishing the contours of the global trading system (Chung, 2019; Attewell 2021). In jockeying for hegemony, and through the ties between shipping and logistics and war and politics, states play a central role in underpinning the global flow of commodities through different means, including SOEs that carry the goods, large contracts and subsidies provided to national carriers, and the securitization of international spaces for the benefit of states' trade

and geopolitical interests (Lin, 2019). This article seeks to understand how the dynamic maritime state continues to evolve in light of the rise of new state capitalisms by studying how expansionary and commercial state capitalist dynamics interact to stave off competitive pressures from global shipping markets and to produce new opportunities for capital accumulation in the port of Valencia.

4.3. Ports and the interaction of expansionary and commercial state capitalist dynamics

In the 21st century state ownership in the shipping industry is still prevalent, particularly in ports, as the literature in transport geography has explored extensively (see de Langen and Sornn-Friese, 2020). This section provides background on the Spanish port investigated here and outlines the significance of port developments to state capitalisms. Ports and other transport infrastructure are largely owned by the state, either nationally, or in most cases, by the municipality/region or city where the port is located. As argued above, the relationship between firms and states unfolds across multiple scales. City and regional strategies of logistics development, enhanced connectivity and import/export competitiveness have grown in importance. In this context, uneven developments in relation to port-cities have been explored by scholars specializing in urban studies and economic geography (Hesse and McDonough 2018). An example here is Singapore and its developmental City-State model, largely motivated by the country's goal to be a major transport hub in Southeast Asia given its geographical location (Olds and Yeung 2004; Sibilia 2019). However, Danyluk (2019) argues that logistics-based developments render port-cities interchangeable, prone to the whim of shipping lines and shippers. This highly competitive environment has led to port authorities making significant investments to expand and automatize ports, increasing their connectivity to remain competitive (Hesse and Rodrigue, 2006). Jaffee (2019) shows that this tendency to increased port-competition leads to port-labor getting the short straw, with logistics services expanding through strategic coupling. This remains the case when the logic behind these developments is to provide jobs and expand the economic relevance of a city or region by strategically coupling to key shipping lanes (Jaffee, 2019). Although both Danyluk (2019) and Jaffee (2019) study port cities in North America, heightened port competition also affects European ports (Notteboom and Rodrigue, 2012; 2008)

Port authorities in Europe hold a specific mandate to operate primarily as private developers, leasing activities to port terminal operators, that in turn may sometimes also be SOEs, while ensuring the continuous growth of the port (also known as the 'landlord port model'; de Langen, 2020). The Mediterranean region and the Port of Valencia are significant, given both the substantial amount of Chinese investment and the statist nature of the shipping business in the region. Spain is a special case as one of the few places in Europe where a centralized SOE owns the ports. The Port of Valencia is one of three state-owned Spanish ports operated by the Valencia port authority, also known as Valenciaport, which is itself coordinated by the state-owned *Puertos del Estado*[32]. Like other port authorities in Spain, Valenciaport is an SOE that participates in the commercial development of the port. Valencia is the largest Spanish port, with over 100 shipping routes connecting the port, and acts as the natural port for the Madrid economic region[33]. The port competes for trans-shipment cargoes with the two other major ports in Spain, Barcelona, and Algeciras[34]. Port SOEs in Spain, given the legal constraints on the behavior of European SOEs and their political mandate, generally act as landlord ports and behave in accordance with the commercial state capitalist dynamic described above.

COSCO has been present in Spain since the 1970s as a transport agent for Chinese exports and imports to China from Spain but has grown into a full logistics firm following COSCO Shipping Ports (CSP) 2017 acquisition of 51% of Noatum Port Holdings valued at 203,49 million Euros, up to that point owned by JP Morgan Asset Management. COSCO shipping group (COSCO) was created in the 1960s to compete in the modern shipping world (Heine 1989). COSCO now controls 12% of the global market share in container shipping, after a recent mega-merger with China Shipping Lines[35]. Currently, COSCO is in the process of globalizing, transforming itself into an integrated logistics company (Yang et al. 2019, 105).

[32] *Puertos del Estado* is the SOE responsible for managing the 46 state-owned ports in Spain, called 'ports of general interest' (*Puertos de Interés General*), which in turn are operated by 28 port authorities.

[33] Refer to: https://www.valenciaport.com/en/port-authority-valencia/about-valencia-port/about-us/

[34] Trans-shipment cargoes are cargoes not destined to the hinterland (inner territory) accessible from a particular port but moved to another port for processing. This business model can be lucrative for ports as income can be secured for handling the container, while avoiding the complexities of moving the cargo out of the port area. At the same time, trans-shipment cargoes tend to be volatile, as liners can choose their trans-shipment hubs as they wish, given that the geographical location of the port is not so important (Danyluk 2019; Stopford 2009)

[35] Source: Alphaliner https://alphaliner.axsmarine.com/PublicTop100/

With the backing from the Chinese state and to remain competitive, COSCO is expanding its port terminal business, while also adding trucking and rail services, storage, last-mile transport services, and digital capabilities. This also follows similar corporate strategies adopted by other leading shipping companies such as Mærsk, CMA CGM and HMM.

The acquisition of Noatum Port Holdings included the operations of the largest of three container terminals in the port of Valencia. As part of this deal, CSP also acquired a terminal operation in the port of Bilbao and railway operations in Madrid and Zaragoza. Since, the port of Valencia, already a major player in the Mediterranean region, has continued growing by being connected to COSCO's shipping and the Ocean Alliance's liner networks[36], while also forming part of the MSRI, as will be discussed further below. Due to both the structural pressures of shipping markets and the policies of the Chinese state, COSCO strategically purports expansionary state capitalist strategies.

Apart from participating in the Maritime Silk Road Initiative, Valencia and Spain are part of the European Union's trans-European transport strategy, the TEN-T program. The TEN-T program seeks to increase connectivity between different parts of the European Union by constructing infrastructure connecting European regions and improving different transport modalities in Europe (air, sea, rail), thus increasing options for shippers (retailers, importers, and exporters of goods, etc.) to circulate commodities around the continent[37]. The TEN-T program is subdivided into a 'core' network with nine corridors (Figure 1) and is tasked to fund infrastructure projects to improve connectivity within the European Union. The EU's TEN-T and connectivity strategies are also impacting on the European transport system and interacts with the state capitalist dynamics analyzed in this article.

This article analyzes embedded case studies, with each case representing a different state capitalist dynamic. COSCO Shipping Ports (CSP), a part of COSCO shipping

[36] Shipping firms act like cartels in the organization of shipping routes, sharing space in the allocation of shipping space and coordinating schedules with other shipping firms to maximize ships' usability. At the present time these alliances comprise 2M (Mærsk and MSC), The Alliance (Hapag-Lloyd; HMM; ONE; Wan Hai) and the Ocean Alliance (COSCO; CMA-CGM; OOCL; Evergreen maritime). Together the three alliances, which comprise nine of the top ten container carriers, and the eleventh on this list (Wan Hai), control about 85 percent of all global container movement at sea (refer to: Alphaliner https://alphaliner.axsmarine.com/PublicTop100/).

[37] https://ec.europa.eu/transport/themes/infrastructure/ten-t_en

group (COSCO), one of the leading Chinese players in the maritime sector[38], represents the expansionary state capitalist dynamic (Table 2 and Figure 1 show COSCO's investments in Europe). Spanish state capitalism and its port SOEs in Valencia represent the commercial state capitalist dynamic. The next sections explore the synergies between these dynamics in making the port of Valencia the key container shipping hub in the eastern Mediterranean.

4.4. Expansionary state capitalist dynamics in Europe

This section showcases how, by solving connectivity issues in new markets through improved management of infrastructure, and by expanding commodity circulation options for its exporters in traditional markets, China seeks to ensure sufficient capacity and logistical support for the expansion of its firms abroad so they can continue to export out of China. Spain seeks to diversify its economy and secure economic development from logistics services industries. These parallel objectives motivate the relationship between two different types of state capitalism, one commercially focused, the other displaying primarily an expansionary state capitalist dynamic. The result has been the growth of the Mediterranean region as a site for logistics in the Asia-Europe trade lane.

The Asia-Europe trade lane is the second largest market for container operations in the world after the Trans- Pacific Lane. In both, the main driver of the trade lane is the export of commodities from China to consumer markets. The Asia-Europe Lane is subdivided into two main maritime trade lanes, the Asia-North Europe Lane, and the Asia-Mediterranean lane. Traditionally the Northern European ports have been the key sites of logistics development in Europe, given their short distance to Europe's main markets and industrial spaces. The Mediterranean trade lane has grown considerably in recent years driven by substantial investments from Chinese firms, among them CSP, particularly in the Port of Piraeus in Greece. Another major investment by Chinese firms in the Mediterranean was the acquisition of Noatum Port Holdings in Spain, which provides CSP a major role in freight throughput in both the eastern and western Mediterranean. The increased connectivity of Europe through the Eurasian land bridge (part of the BRI) has also enhanced the

[38] China is the largest shipbuilder in the world and the third largest owner of commercial ships of all types. China owns the third largest shipping liner company in the world (COSCO shipping) and the second and fifth largest terminal handling operators in the world (COSCO Shipping Ports and China Merchants Port) (UNCTAD 2020).

competitiveness of land options on the Asia-Europe trade lane (Dunmore, Preti and Routaboul, 2019).

Table 4.2. COSCO Shipping Port Terminal Investments in the European Union

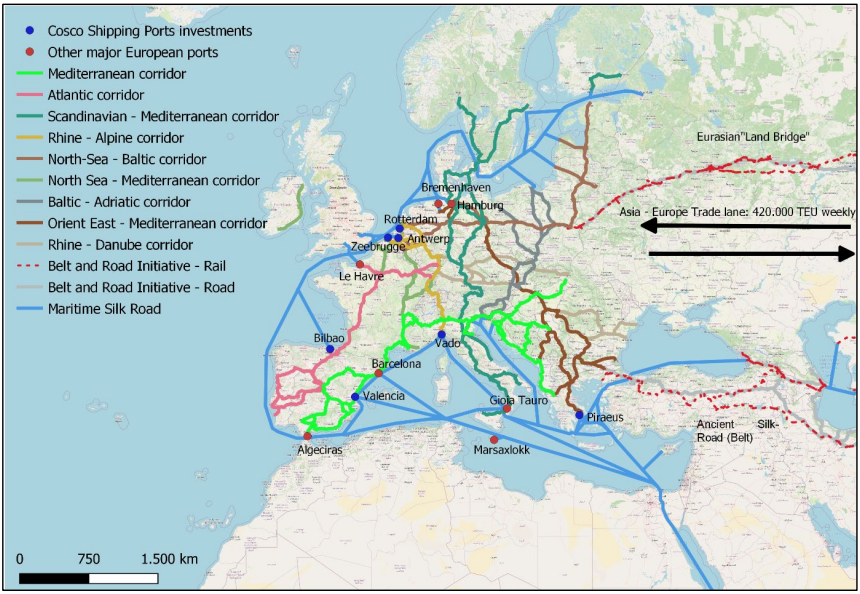
Port Terminal	Shareholding	Maximum Capacity (Twenty-foot equivalent unit - TEU)	Location
CSP Valencia	51%	3,570,000	Valencia, Spain
CSP Bilbao	39.8%	1,000,000	Bilbao, Spain
CSP Zeebrugge	85%	1,000,000	Bruges, Belgium
Euromax	35%	2,550,000	Rotterdam, The Netherlands
Antwerp	20%	2,000,000	Antwerp, Belgium
Vado	40%	300,000 (refrigerated)	Genoa, Italy
Piraeus Container Terminal[a]	100%	6,200,000	Athens, Greece

Source: https://ports.coscoshipping.com/en/Businesses/Portfolio/#OverseasTerminals

a: The port of Piraeus is the largest and most extensive investment that COSCO shipping has made in Europe. Different to its other investments, COSCO also owns the Piraeus Port Authority (67% stake), meaning it is responsible for developing the infrastructure of the port, beyond merely developing and operating a specific terminal within the port (Neilson 2019). For the commercial difference between the terminal and port development business refer to de Langen (2020).

Investments by Chinese firms have been extensively problematized in media and political circles. For example, Piraeus is often depicted as a case of diminishing labor conditions after a Chinese investment, while Hambantota port in Sri Lanka has been deemed by observers to be a case 'debt-trap' diplomacy (Neilson, 2019; Blanchard, 2020). However, as other studies have shown, both the BRI and the MSRI are comprised of multiple projects with a multiplicity of motivations, outcomes, and stakeholders, and not comprehensible as a grand 'national project' by the Chinese government (Blanchard, 2020; Chen, 2021).

Figure 4.1. Map of COSCO Invested European Ports, European Corridor Initiatives, and the Asia – Europe Land and Sea trade lane.



Source: the author. Although many maps oversimplify the planned corridors of the Belt and Road Initiative, shippers and transport firms have many options. For a useful discussion: https://www.silkroadexplained.com/commentaries/mappingthebeltandroad

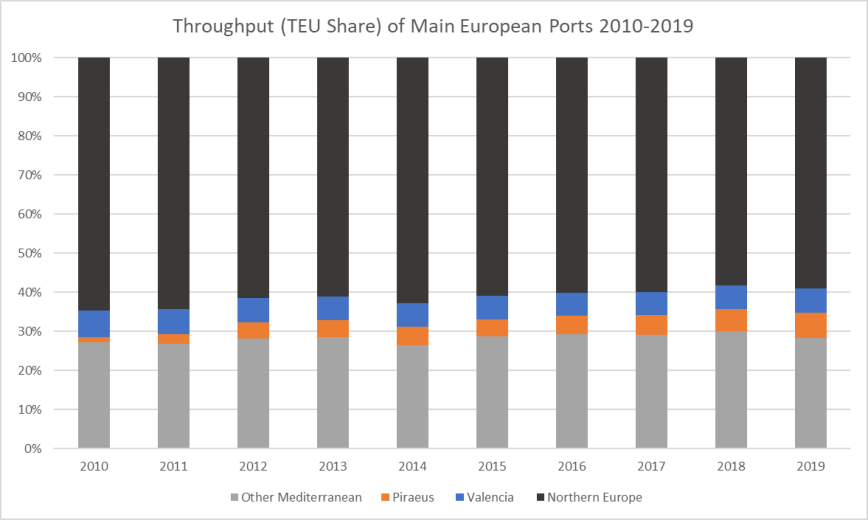
In addition to the role played by Chinese investment, European transport policy is crucial to understanding the development of the Mediterranean region as a site for logistics. Europe's own 'corridor' initiative, the TEN-T program, also raises prospects for the Mediterranean given its goal of better connecting North and South Europe via rail and road. The relative proximity of China to the Mediterranean region - rather than 'going around' the Iberian Peninsula and toward Rotterdam and Antwerp - also gives a competitive edge to the Mediterranean if land connections toward central Europe are cost-effective. Improving efficiency and growing Mediterranean ports, as well as increasing multimodal options from the south of Europe to the center of Europe, create real competition to the established shipping centers in Antwerp, Rotterdam, and Hamburg. This has been coined the 'COSCO-Piraeus-effect', highlighting that in shipping terms the port of Piraeus has grown considerably (Figure 2 (Haralambides and Merk, 2020)).

The TEN-T program and the MSRI provide investments and support to both their respective logistics industries and to exporters/importers because of lower trade costs from increased competition in transport services. The choice of infrastructure is irrelevant to shippers as they can use both corridor initiatives to improve their transport options to ship their goods. Up to this point, the infrastructure developments have been used by both private and state actors. Maersk, a Danish firm, and the largest container shipping company in the world, is using the Eurasian land bridge with increased rail offerings from China to Europe[39]. COSCO shipping group is playing an increasing role in TEN-T program developments in Eastern and Southern Europe[40], with operations management and infrastructure investments in the European railway and port network.

[39] Rail offerings have increased considerably, due to substantial subsidies for Chinese operators (Dunmore, Preti and Routaboul (2019).

[40] Beyond pure throughput metrics, the general logistics business in the Mediterranean has also increased; specifically, the development of logistics parks and zones has been increasing in the vicinities of Mediterranean ports, with sizeable investments by the port Authorities in these parks to attract logistics firms and increase connectivity to their ports. Furthermore, investments in dry ports and freight train terminals have also increased, for example, the Valencia port authority owns a 10% stake in Zaragoza's logistics platform (Pla-Za), where COSCO's CSP Iberian Zaragoza Rail Terminal is located.

Figure 4.2.Throughput (TEU share) of Main European Ports 2010-2019



Source: the author, based on Haralambides and Merk, 2020. Data from Eurostat[41].

These policy-driven corridor investments directly affect the competitive and spatial dynamics of European logistics spaces. As Figure 2 shows, the Mediterranean region has gained ground on the northern European ports, achieving over 40% of total European TEU throughput in 2019. Valencia and Piraeus account for more than 10% of traffic in Europe, with that number poised to increase before the onset of the Covid-19 pandemic. This has transformed the leadership of the European port landscape from a 'North only' top four ports (Bremerhaven, Antwerp, Hamburg, and Rotterdam) to a top six ports (Antwerp, Hamburg, Rotterdam, Valencia, Piraeus, and Algeciras). COSCO shipping group, being the third largest liner and fourth largest terminal operator, provides an extensive network of container trades and connectivity directly to the Chinese market, particularly after its merger in 2017

[41] Data Available at: https://ec.europa.eu/eurostat/databrowser/view/mar_mg_am_pvh/default/table?lang=en North range comprised of Rotterdam, Antwerp, Hamburg, Bremerhaven, Felixstowe, Gdansk, Le Havre, Southampton and
London: South range comprised of: Piraeus; Valencia; Algeciras; Barcelona; Ambarli; Gioia Tauro; Genova; Mersin; Izmit; La Spezia and Marsaxlokk.

with another state giant, China Shipping Container Lines. This merger consolidated and expanded COSCO's global network (Wang et.al. 2020).

The rise of the COSCO shipping group as a core actor in the shipping industry and the competitive dynamics of the shipping industry have driven investments in European terminals and seen the evolution of COSCO into an end-to-end logistics firm. Meanwhile, the MSRI has facilitated the rapid expansion of COSCO across a wide spectrum of port cities. Logistics and shipping are key components of China's industrial policy. At the 18th party congress, the building of China as a 'maritime nation' was prioritized as a national goal, while a directive from the Chinese State Council encouraged the 'going-out' of Chinese-funded shipping and port enterprises (Haralambides and Merk, 2020). COSCO's investments in the Mediterranean can therefore be seen both as fulfilling the expansionary dynamic of Chinese state capitalism while also serving a commercial strategy in improving COSCO's position in global shipping markets. These developments in shipping markets have led to a reorganization of urban and industrial spaces. To remain competitive, shipping companies require control and visibility over their cargo, while port authorities must attract shipping lines and terminal operators to invest in their ports (Chua et al., 2018; Slack and Fremont, 2005; Notteboom and Rodrigue, 2008; 2012). Verticalization of the terminal and liner industry was already in progress and corridor projects such as the MSRI provided political support and financing.

After the 2008 global financial crisis international trade plummeted and later stagnated, impacting shipping demand (Wilmsmeier and Monios, 2020). This led to overcapacity in shipping markets and the under-utilization of fleets, which were consequently either scrapped or laid up in significant numbers, impacting the bottom lines of leading shipping firms (Sibilia, 2019). Chronic issues of overcapacity have been a staple feature of shipping markets (Stopford, 2009). The imperative of lower costs and higher margins has in turn led to consolidation in liner markets, as well as strong port competition to attract the larger vessels that now serve a lower volume of global trade. However, the ports have been compelled to make huge investments and undergo restructuring to accommodate the larger ships (Wilmsmeier and Monios, 2020; Haralambides, 2019). Striving for efficiency and ever-increasing throughput remains the main driver of the port and shipping business as well as the core objective of the state (Cowen, 2014; Chua et.al. 2018).

4.5. Commercial state capitalist dynamics at the port of Valencia

With greater market control of larger shipping players and less ports to call at due to size requirements, shipping groups have been optimizing their schedules to both reduce costs and develop faster and more reliable transport for consumers, while also ensuring their larger ships are full (Danyluk, 2019). To ensure reliability, vertical integration on the land side of the shipping industry is increasingly emphasized, with liners not only owning more terminal businesses, but also calling at their group's terminals more often, allowing them to share data more freely and securing constant volumes for these terminals (Notteboom and Rodrigue, 2012;2008). This economic context frames the relationship of the port of Valencia and COSCO. Valencia Port seeks to secure cargoes and investments from COSCO and its alliance members, while COSCO attempts to optimize its schedule and create synergies between its terminal and container shipping business.

Since COSCO shipping group's investment, stakeholders in the Spanish ports have actively promoted logistic spaces in Spain as a new element to the ancient Silk Road. The port authority has discursively positioned the port as participating in the MSRI, to attract cargoes and investments from China[42]. Furthermore, managers from the Valencia port authority participate in the Maritime Silk Road Forum, the main institutional promoter of the initiative. The port also promotes itself as forming part of the MSRI to third party investors and customers assessing the port for logistics services[43]. These commercial efforts by state-capitalist Spanish firms to tap into China's expansive projects demonstrate the importance of the MSRI in the ongoing expansion of the shipping industry (Lin, 2019). Interestingly, since the arrival of a social democratic party in power, the Spanish government has not played an explicit role in Chinese strategies for operations in Europe. Spain has not signed a state-level Memorandum of Understanding (MoU) with China on the BRI as other southern European nations such as Greece and Italy have. Nonetheless, MoUs at port level were signed during the official visit of Xi Jinping to Spain in 2018. This

[42] Refer to: https://valenciaplaza.com/valenciaport-ratifica-en-china-su-compromiso-para-la-nueva-ruta-de-la-seda and https://www.levante-emv.com/economia/2017/12/11/valenciaport-apuesta-china-ruta-seda-12103264.htm

[43] Refer to: https://www.valenciaport.com/valenciaport-promueve-en-shangai-su-amplia-conectividad-y-su-ubicacion-estrategica-para-el-trafico-maritimo-europa-asia/ and https://www.valenciaport.com/valenciaport-reune-todas-las-bazas-para-ser-un-enclave-estrategico-en-la-nueva-ruta-de-la-seda/

highlights the importance of regional scales in identifying the central sites of state capitalist action in ports.

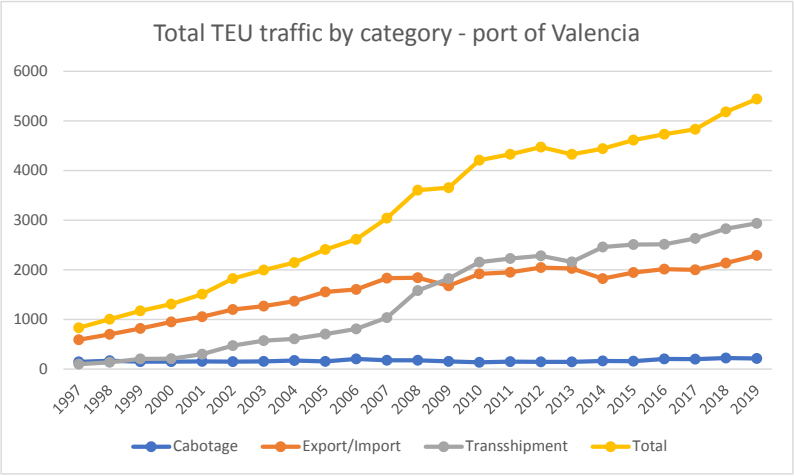
Local port authorities and regional politicians are generally more motivated to actively participate in the Maritime Silk Road, while central government plays a more supportive role. Blanchard (2020) demonstrates how territorial actors, such as mayors, provincial governors, and other state leaders, use their control of geographic areas to attract Chinese investments, with the objective of reshaping urban areas and boosting regional, and ultimately national, development. This arises from commercial imperatives to grow the port and the high level of competition for cargoes. The Spanish state capitalist commercial dynamic of activating the discourse of the BRI and MSRI may be good news for state institutions at regional and local levels. Private investments are perceived as vital by the port authority and *Puertos del Estado*, particularly after the financial crisis, to increase the use of expensive assets and recover competitiveness (Nogué-Algueró 2020), and as public investments in the port of Valencia have markedly decrease after the financial crisis[44].

Since its arrival, CSP has invested over 100 million euros on the terminal in Valencia, and the plan of investment from 2020-2022 is of a further 62 million euros to further modernize and automate the terminal and expand its capacity[45]. COSCO's investment and the growth in throughput has also helped to cement the future planned expansion of the north pier and the building of a new container terminal by TIL, MSC's container terminal business, with a promise by TIL of 1 billion euros of investment to build the terminal. The north pier expansion has led to some conflict in the relationship between COSCO and the Valencia port authority, to the extent that CSP challenged unsuccessfully, the decision of awarding the new terminal concession to TIL in court. MSC continues to be the main client of CSP Valencia Terminal, so the planned expansions would affect CSP Valencia throughput unless COSCO pushes more of their own alliances' flows through Valencia, which would be an overall positive for the port's diversification strategy and to continue growing TEU throughput, primarily for transshipment, a key pillar of the port authority's growth strategy (see figure 3 below).

[44] This is a general trend in the Spanish port sector, as the financial crisis and the prior over-investment in infrastructure has meant budgetary constraints for *Puertos del Estado.*

[45] https://www.cspspain.com/es/noticia/csp-spain-invertira-mas-de-62-millones-de-euros-en-el-puerto-de-valencia-hasta-2022

Figure 4.3.Total TEU traffic by category – port of Valencia

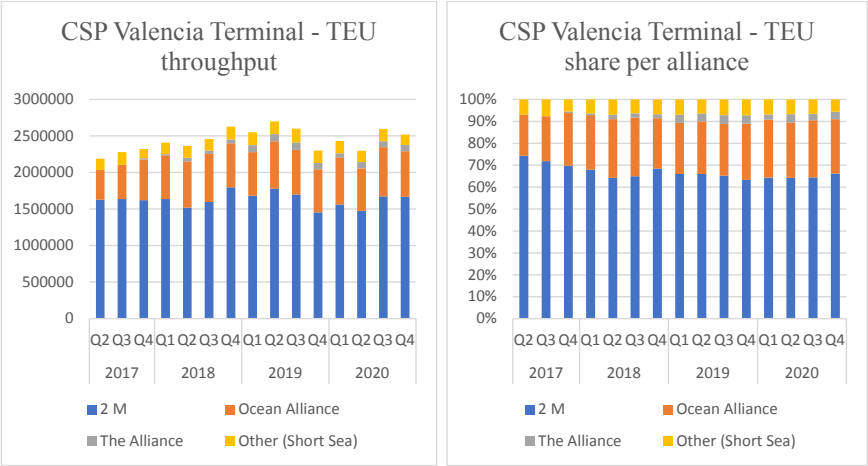


Made by the author, data from the port authority's annual statistics reports: https://www.valenciaport.com/publicaciones/

As vertical integration in the shipping and terminal business has increased over the past decade, investments by the terminal firms of major shipping lines have become more important in ensuring the competitiveness of ports (Notteboom and Rodrigue, 2012; 2008). As Figure 4 suggests, the arrival of COSCO in Valencia has led to the 2M alliance (Mærsk and MSC) being less dominant, with the Ocean Alliance (where COSCO is a member), increasing their share of throughput in Valencia. The 2M throughput share at CSP Valencia terminal dropped from 75% to 66% between 2017 and 2020. The overall throughput of the terminal, Covid-19 notwithstanding, has also risen in absolute terms due to the new connectivity to the Ocean Alliance shipping network. This was the desired result for the Valencia port authority, which now has two major alliances - 2M and Ocean Alliance - calling at its port, and terminals operated by the three major shipping groups - Mærsk, MSC and COSCO. For COSCO, the acquisition of the terminal in Valencia cements the status of CSP as an internationalized entity inside COSCO group, as over half of CSP's 2020 annual revenues, USD 557 million of USD 1 billion, derived from overseas terminals[46].

[46] Refer to COSCO Shipping Ports' annual results: https://doc.irasia.com/listco/hk/coscoship/annual/2020/res.pdf

Figure 4.4. Throughput and share of TEU per Container Shipping Alliance at CSP Iberia Valencia terminal 2017-2020



Source: the author using data from Alphaliner: https://www.alphaliner.com/

Labor issues have also been a problem at the port of Valencia[47]. By the time of the COSCO acquisition in 2017, Spain had ratified a law to liberalize the stevedoring business, three years after the EU's Court of Justice had ruled that port labor had to be liberalized in Spain after years of conflict between the European Commission and Spanish unions. After vociferous protests by unions and other actors in the port sector in the period between the EU's ruling and its ratification in 2017, a final agreement was reached between unions and port companies that reduced salaries in Spanish ports by 10%. During protests by stevedores against liberalization, protests the COSCO investment also occurred because of a fear of deteriorating working conditions, as had happened in Piraeus (Neilson, 2019). After the COSCO investment, workers did not experience the feared undermining of working conditions per se, but they have faced pressure to work longer shifts and increase turnover speeds. In Spain, workers frustrations and struggles are not specifically related to COSCO but encompass the whole terminal handling industry and *Puertos del Estado*. Strikes are relatively frequent and present a difficulty for *Puertos del Estado* when attempting to market Spain and its ports as efficient spaces for the

[47] For an overview on the conflict refer to: https://ec.europa.eu/commission/presscorner/detail/en/IP_13_559.

container transshipment business. The threat to labor continues in the form of the CSP project to automate the Valencia terminal, which was part of the investment agreement with the Valencia port authority and was a precondition for the 2017 takeover of the terminal and extension of the lease to CSP by the authority. Indeed, automation has been a driving force in the breakdown of port labor conditions across the world (Chua et.al. 2018).

4.6. Conclusion

This article has shown how state involvement in the shipping industry through SOEs, and policy mechanisms interacts among the structural pressures of global shipping markets on shipping lines and ports and the needs of cities and regions to be connected to global supply chains. This article has further qualified these state activities based on the predominant dynamics driving them. Amid the rise of shipping actors from Asia, these state capitalist dynamics have been both commercial, using a strategy of maximizing state profits via interaction with Asian SOEs, and expansionary, as a method of internationalization by Chinese SOEs and further connect China to world trade. These dynamics have been identified as conditioning the intentions and actions of stakeholders regarding the investments by COSCO shipping ports at the port of Valencia and its collaboration with the Valencia port authority. The relations and synergies between these two dynamics provided the port of Valencia with more connectivity to liner shipping networks, a diversified set of terminal operators in the port and investments in automation and efficiency in the terminal acquired by COSCO shipping ports. For COSCO group, the investment in Valencia and Spain more broadly, provides further verticalization of its shipping business in Europe to ensure reliability as well as continues to play into COSCO's internationalization and expansion strategy.

The relationship between the port of Valencia and the COSCO shipping group can be better understood by analyzing how container shipping market logics interrelated with state capitalist dynamics. COSCO and other Ocean Alliance partners use the port of Valencia for several reasons: it has logistical advantages; it is an established hub; it has significant throughput capacity; and it is the most important import/export port in Spain. The Valencia port authority, on the other hand, seeks to secure Chinese investments to improve connectivity to key markets, to attract more logistics development to its hinterland in the form of railway connections and operations, and to be more commercially competitive than other ports in its range. Therefore, in this context of increased port and liner competition and the economic

demands of the Spanish economy after the 2008 financial crisis, Chinese expansionary state capitalism has strongly interacted with commercial state capitalism in Spain to deliver synergies in container throughput growth in Valencia. At the same time, the situation for port workers in Valencia has continued to decline amid a common interest by COSCO and the Valencia port authority of further automating the CSP terminal.

The article has used a theoretical framework that views state capitalism as a variegated and relational phenomenon. State capitalism is defined by geographical contexts, scalar differences and institutional relationships and should therefore be judged by its economic outcomes in specific spaces. By focusing on the 'how' of state capitalism and not on the 'why', we can reject the facile construction of another to compete against in the global economy and invigorate a discussion on the different roles that states have played and continue to play in global capitalism. In this case, in particularly the synergies between Spanish and Chinese variegated forms of state capitalism in dealing with the structural pressures of global shipping markets have been shown to reject the false dichotomies of "state vs. markets" or "East vs. West".

State capitalist dynamics surround shipping investments given the structural position of supply chains in the functioning of the global economic system. What new state capitalisms and the case of the port of Valencia demonstrate is how the interaction and relations between different forms of variegated state capitalism, simultaneously competing and collaborating, affects localized economic development. It is key to be connected to China as it becomes the center of gravity in global production and trade. Given the verticalization of shipping carriers and container terminals, states and regions need to connect their ports and maintain good relations to the predominant Chinese container carrier and logistics operator, whether state capitalist or not.

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Chapter 5. Connectivity and geoeconomics: the infrastructural power of Chinese ports

Abstract

The global infrastructure push and the connectivity-turn in global politics are positioning infrastructure and the management of material flows at the center of geoeconomic competition. This competition is for influence and sway in third countries via transport corridor initiatives and connectivity partnerships. This article differentiates the geoeconomic roles states play in governing shipping flows. In doing so, it argues that building and managing seaports has infrastructural power qualities, in that it can extend the political reach of states beyond their territory, while expanding global capitalist relations. Infrastructural power is qualitatively distinct depending on which states project it within a context of geoeconomic competition. Chinese infrastructural power abroad represents a state capitalist projection of power, in sharp contrast to liberal articulations of infrastructural power. This distinction sheds light on the dynamics of intensifying competition between states within global shipping infrastructures. The focus of the paper is the state capitalist infrastructural power of China within the Belt and Road Initiative. During the first period of globalization and western hegemony after WWII, infrastructural power over shipping was used to expand and grow international shipping lanes. This trend is now changing and conflicts over connectivity are growing.

5.1. Introduction

The closure of the Suez Canal due to the MV Ever Given accident on March 23, 2021, the supply chain shortages during Covid-19 and the rising tensions between China and the West are reshaping the geoeconomical calculus surrounding trade lanes and transport infrastructure. The return of infrastructure as a key space for geopolitical contestation has been an on-going process that has accelerated since the announcement by China of the creation of the Belt and Road Initiative (BRI) in 2013 (Schindler et.al. 2021; Liu et.al. 2020). Tensions particularly rose five years later in 2018, with the transfer of ownership of Hambantota Port in Sri Lanka to China Merchants ports due to the Sri Lankan government's need for cash to repay sovereign debt (Jones and Hameiri 2020). Since 2018, western countries have been touting new international infrastructure initiatives to counter the BRI. Projects such as the EU's bilateral connectivity strategies with Japan and India and the newly announced Global Gateway Initiative, the US's Blue Dot Network and the G7 Build Back Better World suggest an acceleration in the competition between China and the West in the shipping infrastructure space (Schindler et.al.2021; Lin 2019).

The control of commodity flows was historically crucial for the nation state. The management of continent spanning trade lanes economically sustained empires, with commercial taxes placed on the flow of goods through ports. Economically, transport infrastructure provides for the conduit of trade and increases output productivity via the acceleration and facilitation of trade. At the same time, the building of infrastructure itself, can to a degree be an investment mechanism in times of economic downturn to rebalance national economies, a strategy followed extensively by Chinese economic planners (Chen 2021; Tekdal 2018; Liu et.al. 2020). As the global economy slowed down after the global financial crisis, states returned to spatial planning and infrastructural investment to restore global competitiveness (Schindler and Kanai 2021).

Although the importance of infrastructure as a precondition for economic activity is well known, the neo-liberalization of state governance during 1980s and the fall from grace of Keynesian economic policy weakened the planning and maintenance of shipping infrastructure (Schindler and Kanai 2021). State retrenchment was spread through the Washington consensus to the global south, where the idea of a thin state with a singular focus on the underlying institutional protection of markets became prominent (Rodrik 2006; Schindler et.al. 2022). At the same time, Bretton woods institutions decreased the amount of lending for infrastructure such as ports

in low-income countries and required the deployment of private capital in projects (Gabor 2021). Large transport infrastructure projects overall were inefficient and costly, providing little return on investment. Rather, trade facilitation policies and low levels of regulatory impediments to cross-border flows were the only ways to achieve peace, economic growth, and security within this paradigm. This contradiction between focusing on the trade of commodities without improving the infrastructure within which they flow led to large infrastructure gaps in low-income countries (Ougaard 2018). Within this global context, the BRI was launched, motivating Chinese firms to expand abroad. This has created new geoeconomic competition regarding global connectivity, as China was perceived to be gaining political power through these infrastructure projects.

Through the lens of geoeconomic competition, an analysis of the concept of infrastructural power of shipping infrastructure provides a way to understand the acceleration of infrastructure initiatives from industrialized nations targeting lower income countries. First, as the infrastructural power of traditional powers under American hegemony gets challenged by the growth of infrastructural power from China, the West reacts in similar fashion by providing competing infrastructure projects. From a maritime economics perspective, the creation of new spaces for transport infrastructure leads to an overall increase in transport connectivity that further fuels globalization and the connectedness of until now peripheral spaces. As the economy, albeit increasingly in conflict, continues to be global, these competing infrastructure projects can increase the supply of transport services, decreasing over time the costs of trade.

As Mann (1986) has argued, infrastructural power rather than absolute power, is the key precondition for states to be able to manage and accrue legitimacy and coercive capacity over citizens. The state has been and still is a crucial actor in understanding the structure of the movement of flows. In the IPE literature, the concept of infrastructural power has been used to explain the power embedded in the control economic policies such as monetary policy and IPR laws (Braun 2021; Schwartz 2019). This paper analyzes the infrastructural power of material infrastructures with global shipping as a case. The focus is the materiality of infrastructural power. Following Weiss (2006); Weiss and Thurbon (2018; 2020) and Khalili (2018), it explores infrastructural power in a transnational context, showing how powerful states project infrastructural power abroad. In doing so, this paper theorizes qualitatively distinct forms of infrastructural power as projections of neoliberal infrastructural power and state capitalist infrastructural power.

The article contends that the infrastructural power literature in IPE has showcased instances of infrastructural power projection characterized by relatively untroubled execution. It does so via scrutiny of the infrastructural power of Chinese infrastructure investments. At the same time, the article contributes to a growing body of research that rejects simplistic and ahistorical geopolitical narratives surrounding the BRI (Schindler et.al. 2022; Liu et.al. 2020; Blanchard 2020; Sidaway and Woon 2017)[48], showcasing how power projections are always contested and often in ways that limits traction. The article combines statistical material on maritime connectivity from UNCTAD (UNCTADstat 2022) and qualitative material. The statistical material provides insight on the structures of maritime networks, and the improvements of connectivity of ports tied together through the Belt and Road Initiative. This allows the identification of the effects of specific policies and infrastructure projects on the connectivity of BRI ports (Wang et.al. 2018; Saeed et.al. 2021). The qualitative material, based on secondary material in the cases of Sri Lanka and Pakistan, is used to showcase the political effects and dynamics of these maritime network shifts, highlighting two instances of perceived Chinese infrastructural power abroad, the port investments in Hambantota in Sri Lanka and Gwadar in Pakistan.

The article is structured as follows. The next section outlines the theoretical basis of the infrastructural power of shipping infrastructure and the role of the state in controlling material flows. Section 3 tracks the historical development of global shipping markets, identifying the main actors and connections to state power, to showcase the pervasiveness of state action in infrastructure and the shipping industry more generally and how infrastructural power is a 'two-way street' (Mann 1993: 59) where state and markets interact. Section 4 analyzes the Belt and Road Initiative as a state capitalist infrastructural power projection by the Chinese government and the effects this has had on shipping connectivity in developing countries. The final section concludes with some reflections on the implications of infrastructural power and intensified geoeconomic competition for developing countries suffering from infrastructure gaps.

[48] By simplistic and ahistorical here is denoted the similar practices attempting hegemonic control by other great powers throughout history, which now condemn Chinese attempts to expand globally economically and politically. Rather a more nuanced, non-moralistic and critical approach to the ways in which other powers have behaved with the rest of the world, particularly in racialized post-colonial contexts, is necessary to understand the moment of hegemonic contestation we found ourselves in.

5.2. The infrastructural power of shipping infrastructure

The mercantilist history of the global economy, its geopolitical and strategic nature as well as its connection to military naval interests, means that the state plays a significant role in the maritime industry (Kardon and Leutert 2022). This complex web of economic and political actors has not garnered significant attention in International Political Economy since the 1980's with the work of Susan Strange (1976) and Alan Cafruny (1987; 1995), who focused on the relationship between hegemony and state power and the commercial and maritime relations of states in the global economy as a source of structural power. More recently, scholars (Cowen 2014; Chua et.al 2018; Sibilia 2019; Campling and Colás 2021; Coe 2014) have renewed this focus on the key role logistics and shipping play in the global economy. As new trade patterns and geopolitical conflicts emerge, there is an urgent need to revisit the international political economy of maritime shipping.

The ability to connect far away spaces and act as a gateway to economic flows is a key source of infrastructural power. However, this does not come without conflict. The creation of interdependencies between stakeholders through connectivity, has led to the weaponization of interconnectedness (Farrell and Newman 2019). Other literature has coined this the rise of 'economic statecraft' (Weiss and Thurbon 2020), the return of 'great power competition' (Schindler et.al. 2022) and the resurgence of 'state capitalism' (Alami et.al 2022). This article focuses on 'geoeconomic competition' to understand how competition within markets translates into inter-state competition (Cowen and Smith 2009; Babic, Dixon, and Liu 2022).

In their edited volume, Babic, Dixon, and Liu (2022) extend the nature of geoeconomics beyond the 'admixture of the logic of conflict with the methods of commerce' (Luttwak 1990: 19). They do so by extending the logic of geoeconomics to a multiplicity of non-state actors and to geoeconomic cooperation, rather than solely competition. Geoeconomic strategy is as a way for states to increase global market control and as a projection of state power abroad (Cowen and Smith 2009; Babic, Dixon, and Liu 2022; Khalili 2018). In terms of transportation, Cowen (2014:8) highlights how the logistics revolution disrupted geopolitical logics, where the logics of power, authority, and sovereignty were territorially bounded in the nation state, with geopolitics framed as a creature of the system of nation states. The advent of global logistics saw the rise of geoeconomics, and the reshuffling of space

by market logics and transnational actors (including the state) in a global network of flows (Cowen and Smith 2009).

Geoeconomics and the control of global economic flows are tightly bound. The projection of infrastructural power at sea is a conduit for geoeconomics (Khalili 2018). Cowen (2014) and Khalili (2018) highlight complementarity between geopolitics and geoeconomics by showing how military encampments created by the US for the invasion of Iraq became international logistics hubs for the flows of global commodities and now exert geoeconomic influence in the gulf. Khalili (2018; 2020) argues that during the transition of the Middle East into oil producing states and their integration into global capitalism, the US Army Corps of Engineers acted both as the security and commercial arm of the US state. The control of circulation is crucial in geoeconomic competition. The use of shipping expansions as a geoeconomic tool transforms the spaces where competition over infrastructure occurs, such as in the Arabian Peninsula or more recently in South-East Asia and Africa, and impacts material circulation in far-flung areas. For instance, Levinson (2006) in tracking the history of containerization, shows how Japanese electronics manufacturers benefitted from reduced trade costs with ships returning empty from delivering military material for the Vietnam war and so reshaping the trade connections between Japan and the US. Similarly, Cafruny (1995) shows how Japan increased its control of ships and the maritime treaty network to secure trade but did not challenge the American shipping regime.

A non-state centric geoeconomics does not take state power out of the equation., Rather, it provides opportunities to see the many ways in which geoeconomics plays out through different actors and within global markets and considers market logics and behaviors informing geoeconomic strategies (Babic, Dixon, and Liu 2022; Moisio 2019).

In line with Khalili (2018:915) this article argues that "The ultimate aim of infrastructural power is the (re)production and enforcement of capitalist relations". For Khalili (2018) infrastructural power can be applied to the policing and control of circulation beyond national boundaries. Limiting or controlling the supply of goods and creating scarcity or maintaining alternative supply routes and sources in the circulation of commodities are ways in which states and private organizations exert infrastructural power (Khalili 2018). Strong states have created shipping regimes of accumulation, which until recently provided for the freedom of the seas and ever-growing trade (Strange 1976; Campling and Colás 2021; Chua et.al. 2018).

This may be no longer the case as the rise of China challenges western hegemony in the global economy. One consequence is that the geoeconomics of open trade and open seas may be changing.

With China building ports and exerting leadership in maritime industries, this article explores the infrastructural power qualities of the state capitalist model of Chinese economic development and Chinese strategies to amass infrastructural power in transport. The analysis raises the specter of China as a challenger to western hegemony over global economic flows.

Michael Mann (1986:70) defined infrastructural power as "the capacity to actually penetrate society and to implement logistically political decisions". This type of infrastructural power conceptualized in the *'Sources of Social Power'* is centralized and territorial with focus on the infrastructures of rule over sovereign territories, both physical (roads) and immaterial (trade regulation and other standards). Infrastructural power in International Political Economy has been primarily used to discuss financial and monetary flows and the hegemony of the US dollar. This literature identifies the monetary and financial policy making power of the US as a form of infrastructural power, which provides sway over trade and the US with a tool to exclude states from global trade networks (Schwartz 2019). Braun and Gabor (2019), Braun (2021) and Braun et.al. (2021) use the concept of infrastructural power to highlight the role of financial centers and central banks in global capitalism and the expanding role of asset managers in creating and policing the norms and rules within which global finance and the global economy more broadly operates. Green and Gruin (2020) focus on the role of these global financial centers in mediating the internationalization of the RMB. RMB internationalization was aided by these financial centers (Green and Gruin 2020). However, their actions were constrained by the infrastructural power of these financial centers being interlinked with US dollar hegemony. In terms of infrastructure, Gabor (2021) shows how wall street by wielding private infrastructural power is creating a new mode of governance of state de-risking for the expansion of private financial investment in developing countries. This body of scholarship demonstrates how actors employ infrastructural power through financial flows to coerce action. However, financial infrastructures are only one part of the global economy, and although global financialization has increased the relative power of these infrastructures, the material underpinnings of the global economy remain central to geoeconomic competition. There is also a clear connection between infrastructure finance and

material infrastructures that allow infrastructure to be converted into an asset class (Gabor 2021).

The financialization of infrastructures is not new (Whiteside 2019; Szabo and Jelinek 2023). Complex mechanisms of financing, constructing, and operating global transportation infrastructures, and the state-capital relations these engender, are a recurrent phenomenon within global capitalism, and as a spatial fix for capital accumulation crises (Bear 2020; Hung 2021). The Belt and Road can be said to be one instance of a coordinated spatial fix to recycle surpluses and domestic overcapacity (Summers 2016; Tekdal 2018). As Mann recognized (1993: 59), *"infrastructural power is a two-way street: it also enables civil society parties to control the state"*. Civil society, broadly understood, also holds infrastructural power over states (Mann 2008). The economic interests of firms, both Chinese and global, on the success of the BRI cannot be overstated. Infrastructural power is relational and projected via consent and legitimation (Weiss and Thurbon 2020). At the same time as recognizing the BRI as a spatial fix, global infrastructure projects have political connotations (Apostolopoulou 2021).

Combining infrastructural power with the notion of structural power (the ability to project power abroad), Weiss and Thurbon (2020) showcase the interrelation between national and international dimensions of state power. In the US case, its ability to project power abroad through, for instance, dollar hegemony detracts from the performance of the domestic economy and diminishes infrastructural power at home (Weiss and Thurbon, 2020). The reverse may be the case in China's projection of infrastructural power, as its power projection abroad through infrastructure building buttresses the development and performance of the domestic economy in the context of crises of overcapacity (Hung 2021) and expands global markets for Chinese firms. This has unfolded through a legitimation process of the Chinese model of infrastructure-led development and with the consent of the countries receiving investments. It has also unfolded, until recently, with the consent of other powerful actors in the global economy. This article shows how shipping infrastructures and infrastructural power are coupled with patterns of global capitalist development and geoeconomic competition.

5.2.1. Infrastructural Power Projection

Given the relevance of shipping to state power, powerful states participate in geoeconomic competition over the control of circulation (Kardon & Leutert 2022; Noorali etal 2022). The strategies states deploy to amass infrastructural power vary significantly depending on the relations between the state and capital. Neoliberal or state capitalist states embody different relations with markets, with both aspiring to hold and project infrastructural power.

Shipping infrastructure provides infrastructural power to the state and shipping firms through 4 main avenues. 1) As a gateway of flows. The capacity to move goods is a physical constraint on the national economy. 2) As a competitive market. The price mechanism can hamper or facilitate the movement of goods. 3) As an entanglement of stakeholders[49]. Given the multiplicity of transport market segments, state authorities and political goals that meet in shipping infrastructure, the coordination of these actors provides infrastructural power. 4) As a means to control flows. Securitization provides both the power to allow flows and to stop flows. Table 1 below shows how these aspects of the infrastructural power of shipping infrastructure relate to neoliberal and state capitalist projections, theorized as two qualitatively distinct ways for states to project infrastructural power abroad.

Table 5.1. Infrastructural power of shipping infrastructure – neoliberal and state capitalist projections

Infrastructural power of transport infrastructure	**Neoliberal projection**	**State capitalist projection**
As a gateway of flows. The capacity to move goods is a physical constraint on the national economy	Incentivize private actors through public private partnerships to expand infrastructure capacity.	Build capacity through state finance and state-owned enterprises to facilitate trade growth.
As a competitive market. The price mechanism can hamper or facilitate the movement of goods	Shipping markets shape the geographical formation of maritime networks.	By providing capacity, markets can be reformed and change the flows of maritime networks, in favor of national commercial interests.
As an entanglement of stakeholders. Given the multiplicity of transport market segments, state authorities and political goals that meet in shipping infrastructure, the	Through global governance and standards control, the capacity to coordinate flows is achieved while leaving markets to themselves.	By connecting emerging markets to large brokers of shipping flows, the coordinating role can be captured.

[49] See Braun et al. 2021 for the use of the 'entanglement of stakeholders' in the infrastructural power of global finance.

coordination of these actors provides infrastructural power.		
As a means to control flows. Securitization provides both to the power to allow flows and to stop flows.	Securitization of flows through military and naval supremacy remains a key tenet of American power, leading to geoeconomic tensions.	As global reach is built, securitization grows, leading to geoeconomic tensions.

Source: Made by the author.

Whereas neoliberal capitalism is characterized by the formal institutional separation between the economic and political domains, state capitalism transcends this formal separation, particularly in the public ownership of capital and the control of state-owned enterprises across a plurality of strategically important national industries (van Apeldoorn et al. 2012; Alami and Dixon 2020a; 2020b). Neoliberal and state capitalism exist on a continuum of variables of state-led intervention, shaped by the broader geometries of power within each system (Alami and Dixon 2020a; 2020b). While in practice state capitalism seems to be more likely to mobilize market directing or controlling strategies, these strategies can also be used by liberal states (van Appeldoorn and de Graff 2012; 2022). For example, Japanese economic strategies in South-East Asia are marked by both market directing and controlling strategy. Although its focus on mercantilist approaches to global investments, advantaging Japanese firms, has changed, Japan continues to assert its regional influence in South-East Asia through state support for its firms (Katada 2020). It does this through a state-led liberal strategy, bridging mercantilist notions of national competitiveness with a rule based regional order for trade and investments agreements (Katada 2020). However, given failure to compete against the BRI in the region (Katada 2020: 179-82) the collaboration between the Japanese state and Japanese firms has become stronger again, with the goal of promoting high quality infrastructure investments as an alternative to BRI. The goals remain similar in that infrastructural power is exerted at home and abroad to fend off the crisis tendencies of capital and secure a beneficial material flow within the global economy (Khalili 2018). The following sections focus on the infrastructural power projection of China and show how its projection of infrastructural power articulated through a state capitalist governance strategy reproduces global capitalist expansion.

5.3. Globalized trade and transport infrastructure as infrastructural power

As trade became deregulated during the period of neoliberal globalization, transport infrastructure development and the shipping industry followed suit. However, European and Japanese firms continued to enjoy heavy state support during this period of deregulation in the industry, while shipping firms, primarily in the US and the UK, failed or were bought by competitors who enjoyed state support (Haralambides and Merk 2020). With the rise of China and its infrastructure led model of growth, the state mediated global shipping system was further boosted (Schindler and Kanai 2021). Opportunities in both Europe and Asia for profitable infrastructure development started drying up amid the fall in global demand from 2008, setting the stage for expansion to new areas[50]. This section outlines the internationalization and consolidation of Chinese shipping firms and terminal operators, foregrounding their rise in the maritime supply chain.

The transition towards neoliberal globalization in the late 1970s was characterized by a progressive deindustrialization of the Global North, coinciding with the introduction of China's Open-Door Policy. This gave rise to the opportunity for global production networks (GPN) to facilitate the outsourcing and offshoring of manufacture- and assembly-oriented industrial activities to China. This newly emerging global spatial division of labor was enabled by the advance of innovation in telecommunications and transportation allowing the reduction of geographical space and time constraints so international production could become globalized (Cowen 2014; Danyluk 2018). The accession of China into the WTO in 2001 marks an important milestone, which led to a rapid acceleration of its export levels so that it would eventually adopt the moniker of 'the factory of the world' (Gereffi 2014). In this context, Chinese state institutions were mobilized "to channel socioeconomic assets and advanced infrastructure investments" (Brenner 2004:214) to promote the rapid integration of the Chinese coastal region with the global economy and support the growth of the Chinese shipping industry. The massive growth in transport demand during the late 1990s and early 2000s, primarily driven by China's explosive growth, came to an end during the global financial crisis in 2008, when

[50] This is not only a Chinese phenomenon, for example, DP world, a major SoE port operator from the USA; began to cooperate with a Russian firm on Arctic shipping, raising their position in the Arctic passage, a new space of competition for transport infrastructure and geoeconomics (Kolodyazhnyy et al., 2021 in Babic, Dixon and Liu 2022: 4).

shipping firms incurred massive loses and industry consolidation occurred (Monios 2022). To stave off this crisis, shipping lines reinforced the alliance system[51].

Although liberalization occurred in parallel, European and Asian shipping lines continued to have strategic partnerships with states or remained state-owned enterprises. Firms like the French liner shipping company CMA-CGM or South Korean HMM, have strong ties to their respective governments and their connectivity is gravitationally geared towards their headquarter countries. Others such as COSCO shipping or the port terminal operator Hamburger Hafen und Logistik (HHLA) are directly state-owned firms, whose statutes enshrine national service provisions. There are various rationales for an active role of the state in the shipping industry (cf. de Langen and Sornn-Friese 2020). Nonetheless, these global firms are diversified transport groups, with their own strategic objectives, troubling the conception of states' infrastructural power in shipping infrastructure as monolithic.

While the shipping industry has been global since containerization in the 1970s and 80s (Levinson 2006), the internationalization of the container shipping terminal business has more recently created large global firms that manage the terminal concessions around ports (Slack and Fremont 2005; Notteboom and Rodrigue 2012). These firms are more directly linked to states, as the majority started as port authorities developing key hub ports nationally, such as PSA in Singapore or DP world in Dubai. Port authorities and land developers drive strategic development in collaboration with all other stakeholders. Ports remain predominantly state owned but are commercially driven enterprises (de Langen and Sornn-Friese 2020). See Table 5.2 below for an overview of top global port operators. Importantly COSCO ports and China Merchants ports, the two SoE Chinese operators, have gone from unknown in 2000 to number 2 (COSCO) and number 6 (China Merchants) among the top 10 port operators by 2019.

[51] Shipping firms collaborate in the organization of shipping routes, sharing space in the allocation of shipping containers and coordinating schedules with other shipping firms to maximize ships' usability.

Table 5.2 Top Ten World Container Terminal Operators, 1996-2019

Rank	1996	2001	2003	2006	2008	2013	2016	2019
1	PSA	HPH	HPH	HPH	HPH	PSA	PSA	PSA
2	HPH	PSA	PSA	PSA	PSA	HPH	HPH	COSCO
3	P&O Ports	APMT	APMT	APMT	APMT	APMT	DPW	APMT
4	Mærsk	P&O Ports	P&O Ports	DPW	DPW	DPW	APMT	HPH
5	Sea-Land	Eurogate	Eurogate	COSCO	COSCO	COSCO	COSCO	DPW
6	Eurokai	DPA	COSCO	Eurogate	Eurogate	TIL	CM Ports	CM Ports
7	DPA	Evergreen	Evergreen	SSA Marine	SSA Marine	China Shipping	TIL	TIL
8	ICTSI	COSCO	DPA	APL/ NOL	APL/ NOL	Hanjin	ICTSI	ICTSI
9	SSA	Hanjin	SSA	HHLA	HHLA	Evergreen	Evergreen	CMA CGM
10	HHLA	APL/ NOL	Hanjin	Hanjin	Hanjin	Eurogate	Eurogate	SSA Marine

Source: Drewry 2021 in Aritua et.al. 2022: 12. Rankings based on container throughput.

The logic of the port model is being commercialized, meaning a singular focus on profits, rather than the purposes of the state in providing and facilitating national trade and connectivity and securing supply chains. Nonetheless, ports remain a dual type of infrastructure, with, for instance International Relations scholars emphasizing the access of naval fleets to commercial ports for resupply (Kardon and Leutert 2022)[52].

This section has described the historical development of shipping markets and the movement from a nationally bounded public industry to transnational shipping. As showcased the internationalization of the industry is a general trend, and its connections to various states is pervasive, given its strategic position as a conduit of global trade. Nonetheless, the rise of China, motivated a new statist turn in infrastructure building, which has further accelerated the expansion of global shipping markets and geoeconomic competition, as discussed below.

[52] Of course, the Chinese naval fleet resupplying in commercial foreign ports owned by Chinese firms, only works in times of peace, and their access to the port is regulated by the sovereign nation, and not by the port firm itself. In the advent of conflict, these assets can be easily re-nationalized, and the foreign owners kicked out.

5.4. The rise of China and state capitalist infrastructural power

The development of infrastructure in China has been predominantly state driven. Infrastructure has been a key asset for the PRC since the beginning of the reform and opening-up period. In this period, efficiency and the business environment became key policy priorities for the Chinese government, which focused on establishing infrastructures that decreased the costs of trade in the coastal areas of China. They did this through the mobilization of large central and regional SoEs in the construction and transport sector and cheap financing from development banks (Ye 2020). This strategy increased the production capacity of the Chinese economy and created ripple effects in supplier industries such as steel and cement and large numbers of jobs. This section addresses the effects of infrastructure led growth internally in China and in the global economy. Particular focus is afforded the debate surrounding overcapacity and internationalization.

The process of infrastructure building in China has been highly uneven, and predominantly focused on the coastal cities (Rolf 2021). From the outset, the imbalance was by design and reflected different coastal-inland and coastal industrial development strategies (Chen 2022). Coastal development was premised on connecting China to global production networks. The coastal-inland strategy focused on the inland regions providing cheap labor and raw materials for the economic development of the coastal regions. The re-balancing of this initial strategy has also been driven by investments in infrastructure in the inland region (Chen 2022). However as inland investments were made, coastal provinces continued to push infrastructural investment further. This infrastructure and investment led growth model has been running into overcapacity in recent years (Tekdal 2018).

To recycle its surpluses and overcapacity and to grasp an opportunity provided by the infrastructural gap abroad, China initiated the BRI (Ye 2020). Of the projects under the BRI, many started project developments before the outset of the BRI and many actors were already involved in global projects. From an economic rationale, the projects are designed to benefit Chinese capital abroad and increase the global competitiveness of Chinese firms. From a foreign policy perspective, the goal was to organize key infrastructure projects where the CCP could externally gain soft power from governments receiving investment (Ho 2020; Kardon and Leutert 2022). At the same time, by keeping the strategy open ended China could embrace

both market and political strategies (Ye 2020). This resonates with infrastructural power projections abroad from the US, with the need to balance economic imperatives in the national economy and international objectives informing policy on American trade imbalances and regional economic development (Weiss and Thurbon 2018).

From a Chinese perspective the BRI is a harbinger of peaceful global coexistence, one of Mao's foreign policy ideals (Dunford and Liu 2019:151 Cheng and Apostolopoulou 2023; Sidaway and Woon 2021). At the same time, the BRI follows the position of Xi Jinping of a return to a new form of state capitalism as a key strategy for the Chinese political economy. This is part of the CCPs ambition to maintain ideological primacy and rein in over empowered private investors and markets that might have dominated China after the reform and opening period. Diplomatically, the BRI is used to acquire political influence regionally and recognition of the benefits of Chinese development. The vision, from a Chinese perspective, is thus one of international cooperation while realizing domestic national interests.

However, the BRI is a variegated set of projects and a relatively unorganized push to go-out by Chinese institutions and firms (Chen 2021; Jones and Hameiri 2020; Liu et.al 2020). Of particular importance, and as table 5.3. shows, most Chinese port projects are part of joint ventures with other shipping and terminal firms, private capital, or sovereign wealth funds. This nuances the idea of a strategic state capitalist infrastructural power projection from China. Presenting the whole context of the investments showcases the complexities of investments relations, contractual processes, controlling stakes and partnerships with other firms within Chinese global investments in port terminals (Liu et.al. 2020).

Table 5.3. Chinese investments in container shipping ports [53,54]

Terminal	Country	Capacity (TEU)	Chinese Operator	Ownership Stake and Partner
Europe				
CSP Zeebrugge	Belgium	1,300,000	CSP	85,45% - 14,55% Zeebrugge port authority.
Antwerp Gateway	Belgium	3,700,000	CSP	20% CSP
Terminal des Flanders	Belgium	600,000	CM Ports - TL	Terminal Link 91% (CMA CGM (51%) and China Merchants Port (49%)) – 9% Port of Dunquerque
Eurofos	France	600,000	CM Ports - TL	Part of Port Synergy SAS– Joint venture between DP World and Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Hamburg - Container Terminal Tollerort	Germany	4,000,000	CSP*	25,4% CSP – 74,6 % Hamburger Hafen und Logistik (HHLA)
Piraeus Container Terminal	Greece	6,200,000	CSP	100% stake by CSP on Terminal, 82% stake on the Piraeus port authority by CSP.
Port of Thessaloniki	Greece	500,000 and breakbulk	CM-Ports - TL	No ownership stake, mutual cooperation agreement signed on operational manners, the port uses Chinese operational software for its container terminal.
Vado	Italy	850,000	CSP	40% CSP - 60% Others.
Terminal de France	Le Havre - France	800,000	CM Ports - TL	Part of Port Synergy SAS– Joint venture between DP World and Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Terminal Nord	Le Havre - France	750,000	CM Ports - TL	Part of Port Synergy SAS– Joint venture between DP World and Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Malta Freeport	Malta	2,500,000	CM Ports - TL	Terminal Link (50%) (CMA CGM (51%) and China Merchants Port (49%)). In joint venture with Yilport 50% (Turkey)
Terminal du Grand Ouest	Nantes- France	180,000 and Bulk	CM Ports - TL	MKF (50%) – 50% Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Euromax	Netherlands	3,200,000	CSP	35% CSP - 75% Eurogate and others.
Rotterdam World Gateway	Netherlands		CM Ports - TL	Terminal Link 30% (CMA CGM (51%) and China Merchants Port (49%))
CSP Valencia	Spain	4,100,000	CSP	51% - 49% JP Morgan.
CSP Bilbao	Spain	1,000,000	CSP	39,8 % - 60,2% JP Morgan.
Kumport	Turkey	2,100,000	CSP – CM Ports	65% Stake between CSP, CM PORTs and Chinese Investment fund CIC – last 35% owned by the Oman's SWF.
Africa and Middle East				
Kribi Container Terminal	Cameroon	1,400,000	China Harbour Engineering Company (CHEC)	In partnership with CMA CGM and Bolloré Group (Now part of MSC's TIL).
Terra Abidjan	Cote d'ivory	Ro-Ro Terminal	CM Ports - TL	Terminal Link - CMA CGM (51%) and China Merchants Port (49%).
Port de Djibouti S.A. (PDSA)	Djibouti	1,950,000 Bulk and Ro-Ro	CM Ports	CMHI acquired 23.5% of PDSA in 2013. PDSA controls the Port of Djibouti (POD), Doraleh Container Terminal (DCT), and Doraleh Multi-Purpose Port (DMP)
Suez Canal Terminal	Egypt	5,000,000	CSP	20% - 80% Suez Canal Port Authority

[53] This table provides an overview of functioning infrastructure. Many planned projects for further shipping infrastructure exist. However, until these projects become operational, their inclusion would be purely speculative. Specific projects omitted as they are not fully completed: Qasim Port in Pakistan, Lekki and Akwa Ibom port in Nigeria, Conakry Port in Guinea, Kyauk Pyu in Myanmar, Port of Pointe Noire in Congo and the new container terminal at Port of Odessa in Ukraine. Partly operational ports still in expansion are included.

[54] This table only showcases terminals focused exclusively or partially on containerized cargo, either as pure containers (TEU), Roll-on-Roll-off (RO-RO) cargo, or multi-purpose terminals. It does not include other types of terminals such as oil and gas terminals or other type of general cargo and breakbulk terminals (agriculture or mineral based). Chinese interests are also present in these shipping market segments.

Umm Qasr Terminal	Iraq	Undisclosed	CM Ports - TL	Terminal Link - CMA CGM (51%) and China Merchants Port (49%).
Eurogate Tanger	Morocco	1,600,000	CM Port - TL	MSC 20%; TangerMedManagement 30% (Eurogate 40%; Contship 40%; Terminal Link 20%); Terminal Link 30%.
Somaport, Casablanca	Morocco	500,000 Bulk and Ro-Ro	CM Ports - TL	Terminal Link - CMA CGM (51%) and China Merchants Port (49%).
Tin-can Island Container Terminal Limited (TICT)	Nigeria	470,000	CM Ports	28,5% - 47,5% if combined with China-Africa development fund.
Red Sea Gateway Terminal	Saudi Arabia	2,500,000	CSP	20% - 20% PIF - SWF of Saudi Arabia– 60% Private Shareholders
Port Sudan	Sudan	700,000 and Breakbulk	China Harbour Engineering Company (CHEC)	In collaboration with Sudan Sea Ports Corporation (Sudanese SoE)
Lomé Container Terminal S.A.	Togo	2,200,000	CM Ports	50% CMP 50% TIL (MSC)
CSP Abu Dhabi Terminal	UAE	2,500,000	CSP	40% CSP - 60% DP World
Asia and Australia – Excl. China				
Newcastle Port	Australia	2,000,000	CM Ports	50% CM Ports – 50% The Infrastructure Fund "TIF" a private fund investing in infrastructure assets
Muara Port	Brunei	Multi-purpose port – 500,000	Guanxi Beibu Gulf Port International Group	In partnership with Darussalam Assets Sdn Bhd a sovereign wealth fund of the kingdom of Brunei.
Adani CMA Mundra Terminal Private Ltd	India	1,300,000	CM Ports - TL	50% ownership - Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Kuala Tanjung	Indonesia	Multipurpose port but focusing on container moving forward	Zhejiang Provincial Seaport Investment and Operations Group, Co.	Agreement of collaboration with Zhejiang seaport group (operators of Ningbo port in China) and with Rotterdam Port Authority to help the Indonesian port increase capacity and compete in the Malacca strait. Asset owned by PT Pelabuhan Indonesia I (Persero), an Indonesian SoE.
Haifa Port	Israel	1,000,000	Shanghai International Port Group (SIPG)	25-year concession agreement – asset ownership by The Israel Ports Development & Assets Company Ltd
Kuantan Port	Malaysia	600,000	Beibu Gulf Ports	Joint Venture by IJM Corporation Berhad (60%), and Beibu Gulf Holding (40%). CSP has 4.34% stake on Beibu.
Gwadar Port	Pakistan	130,000 Bulk and Ro-Ro	China Overseas Port Holding Company	80% COPHC - 20% Other
COSCO-PSA terminal	Singapore	4,850,000	CSP	49% CSP – 51% PSA (Singapore Port Authority).
CMA CGM-PSA Lion Terminal Pte Ltd	Singapore	4,000,000	CM Ports - TL	49% ownership - Terminal Link (CMA CGM (51%) and China Merchants Port (49%)) – Other 51% owned by Singapore Ports Authority (PSA)
Busan Terminal	South Korea	4,000,000	CSP	4.89% stake by CSP.
Busan New cont. terminal	South Korea	3,000,000	CM Ports - TL	MKIF (30%) – (70%) Terminal Link – (CMA CGM (51%) and China Merchants Port (49%)).
Colombo International Container Terminals Limited (CICT)	Sri Lanka	2,400,000	CM Ports	85% CM Ports, 15% Sri Lanka Port Authority
Kao Ming Container Terminal, Kaohsiung port	Taiwan	2,800,000	CSP/CM Ports	Yang Ming Marine 60%, the Tripartite JV 30% (Consistens of Cosco Pacific 10%, CM Ports 10% and China Shipping Terminal Development) and Ports American Group 10%
Laem Chabang International Terminal Co Ltd (Thailand)	Thailand	1,800,000	CM Ports - TL	14,5% indirect equity stake - Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Gemalink Terminal Link Cai Mep Terminal Joint Stock Company	Vietnam	1,500,000	CM Ports - TL	25% ownership - Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
North, Central and South America				
TCP Brazil Paranagua	Brazil	2,500,000	CM Ports	90% stake.
Kingston Freeport Terminal	Jamaica	1,400,000	CM Ports - TL	Terminal Link – (CMA CGM (51%) and China Merchants Port (49%))
CSP Chancay (Under Construction)	Perú	1,000,000	CSP	60% - 40% Volcán Compañia Minera

Seattle Terminal	USA	400,000	CSP**	13,33% - Partnership with Stevedoring Services of America ("SSA Marine") and Matson (US regional container shipping line and Ports of America)
West Basin Container Terminal LLC (WBCT) – Los Angeles	USA	Over 1,000,000 lifts	CSP**	Joint Venture with Yang Ming Marine Transport Corporation, and Ports of America
Pacific Container Terminal – Long Beach	USA	Over 1,000,000 lifts	CSP**	Joint Venture with Stevedoring Services of America ("SSA Marine") and Terminal Link (CMA CGM (51%) and China Merchants Port (49%))
Houston Terminal Link	USA	1,400,00	CM Ports - TL	Terminal Link (CMA CGM (51%) and China Merchants Port (49%)) in collaboration with Ports of America.
South Florida Container Terminal	USA	250,000	CM Ports - TL	51% Terminal Link – (CMA CGM (51%) and China Merchants Port (49%)) and APM terminals (Mærsk) 49%.

Source: Author – Various sources. *The deal for the Port of Hamburg, although formally agreed by all parties, has now been held up by the German Federal Government for critical infrastructure security reasons. *These terminals are under Cosco Pacific, the US subsidiary of Cosco Shipping Group, rather than under the Cosco Shipping Ports global subsidiary.

The absence of local capacity to harness BRI funds has also led to failed projects and less than the projected results in receiving countries. The two most commentated upon projects related to shipping and the MSRI, are the port of Gwadar in Pakistan and the port of Hambantota in Sri Lanka. These two ports have been widely discussed due to the politics associated with the projects (Blanchard 2020; Liu et.al. 2020).

First, the Gwadar port in the Baluchistan region of Pakistan. The Gwadar port was built as a new gateway port for the CPEC corridor under the BRI and to provide new opportunities for one of the less developed regions of Pakistan. Notably, a major SoE from Zhejiang province was offered a stake in the project but declined, given the commercial unviability of the project. This led to the project being granted to a newly formed firm (Ye 2020: 183). This showcases the governance dynamics between different institutions in China. Although many observers give the Chinese central government ultimate power in decision making, this is far from unequivocal. Different administrative units interpret and adapt the central government's 5-year plans, strategies, and policies to local contexts (Ang 2016). At the same time firms also adapt central government policy direction to their own ends. Several rounds of SoE reform, have empowered SoEs and allowed them to independently react to central government policies to satisfy commercial needs (Ingeman Beck 2023). Similarly, firms and government units will lobby the central government and frame projects as positive for the central government to access funding (Ang 2016; Ye 2020). In relation to the BRI the situation is even more complex. Although the Chinese Ministry of Foreign Affairs (MoFa) and its diplomatic corps play a role in communicating and framing projects, it is the Ministry of Commerce (MoC) and the state-owned policy banks which make decisions about which projects to invest

in. At the same time the Ministry of Transport (MoT) and the State-owned Assets Supervision and Administration Commission (SASAC) have most regulatory power over COSCO and China Merchants Ports. This organizational architecture showcases the fractured nature of governance in China, and the various mechanisms for influence available to Chinese stakeholders in BRI projects (Jones and Hameiri 2021). While the decision-making apparatus is fractured, the outcomes of investments are also contested.

Very little benefit has come to the town of Gwadar[55]. Chinese projects in Gwadar have incited further conflict in the region. In terms of economic outcomes, the port is rarely utilized, with COSCO shipping, the Chinese national carrier rarely stopping and preferring to use the infrastructure in Karachi to service trade with Pakistan[56]. In addition, a project in nearby Iran, funded with money from India, is competing for the same trade. If anything, the port, its securitization, and other Chinese projects in the town have incited even more conflict in the region.

From the point of view of the Pakistani port strategy, the port is another way of attempting to attract foreign investments to the region. Pakistan does not have any local firms capable of running the ports, as their ports in Karachi are run by Hutchinson Ports and DP World, global firms from Hong Kong and Dubai. Therefore, Pakistan's commercial strategy was simply one of attracting foreign investment (Liu et.al. 2020), though the investment has not made a significant impact in Gwadar.

The second case used to critique BRI projects is Hambantota port in Sri Lanka. China Merchants Group received the real estate the port sits in for a 99-year concession on the basis of a debt-asset swap, where China Merchants Group, received the land as repayment for the loan to develop the terminals in the port. China was then attacked by primarily Indian and American think tanks and commentators for practicing debt-trap diplomacy. However, this concept of debt-trap diplomacy has been challenged. Many of the woes of the Sri Lankan economy do not come from indebtedness to China (Jones and Hameiri 2020). Jones and Hameiri (2020) unfold the many intricacies of the Sri Lankan case. The capital

[55] See https://carnegieendowment.org/2018/07/31/along-road-gwadar-and-china-s-power-projection-pub-77217 and https://foreignpolicy.com/2021/12/14/pakistan-gwadar-port-protests-china-belt-and-road-cpec/

[56] Although it formally has the Gwadar port in its schedule, to support Chinese political strategy, it skips the port often given the lack of business in the port.

gained by China Merchant Ports taking over the port in Sri Lanka went into outstanding debt repayments of World Bank loans, meaning that the asset was conceded to repay those who criticized the sale in the first place (Jones and Hameiri 2020). Furthermore, a change in government to one favoring India and the US soured the relationship with the Chinese firms, reflecting the importance of local politics in determining project outcomes.

Regarding port policy, like Pakistan, Sri Lanka does not have locally owned operators, though the Sri Lanka port authority also manages some of the terminals and has entered joint ventures with Chinese operators (see table 5.3). Sri Lanka attempted to balance this by creating a project for a competing port to be built with Japanese capital and operated by a large Indian port operator, Adani Ports[57]. This highlights the importance of investigating the way other East Asian nations participate in the expansion of transport infrastructures in the region (Katada and Liao 2020), both when competing with the BRI and when past and new rounds of infrastructural investments connect the region further.

China Merchants group interests in Sri Lanka go beyond the port of Hambantota, as they have also invested in the port of Colombo, planning to develop both the port and the urban areas around the port, the 'Colombo port city'[58], with hotels, residential high rises, and industrial areas (Apostolopoulou 2021). This follows similar development strategies of China merchants in their Chinese ports, like Shenzhen. Aritua et.al. (2022: 44) describes this model in these terms, "The Shenzhen port-city model has been named "front-port, central-park, back-city" (前港-中区-后城). Since 2017, China Merchants Group has been promoting the global replication of this model. It is building specialized industrial towns in several cities across China and has been exploring the possibility of exporting the model overseas under the Belt and Road Initiative to countries such as Djibouti, Sri Lanka, Tanzania, and Togo. This shows how success in developing port cities in China lends legitimacy to firms when investing abroad, while the consent of local stakeholders allows the infrastructural power of China to be projected abroad.

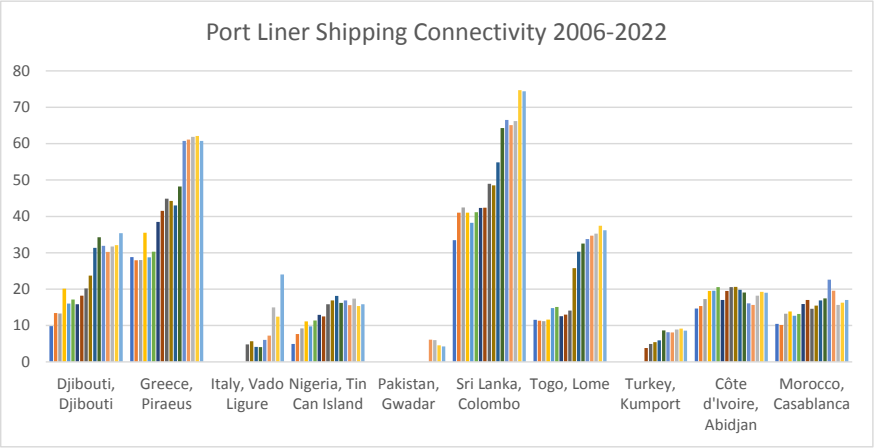
The increased politicization of the Chinese takeover of ports, even as connectivity and productivity in some of the ports has increased, demonstrates how

[57] See https://www.lowyinstitute.org/the-interpreter/india-s-answer-china-s-ports-sri-lanka

[58] Colombo port city has been an urban development plan from the Sri Lankan government for decades before the Chinese arrived, emphasizing the way in which Chinese actors also adapt to local political economy requirements for commercial gains.

infrastructural power projection generates conflict (see figure 5.1 below). The success of Chinese invested ports is not a given. While major successes in increasing connectivity are evident in Piraeus, Djibouti, Sri Lanka and Togo, other ports have been faltering or essentially remained unchanged after Chinese investment. The record debunks the idea of Chinese take over as a silver bullet for development (Liu et.al. 2020).

Figure 5.1. Connectivity trends in BRI countries and Chinese invested ports.



Source: UNCTADstat (2022) - Port liner shipping connectivity index. The connectivity index is an indicator of a port's presence in the global shipping network. The higher the index, the larger the capacity of the port to play a role in international trade. Selected ports represent a varied sample of geographical locations as well as ports where investments have been publicly debated, such as Piraeus, Gwadar or Sri Lanka.

This section addressed the BRI as a Chinese state capitalist infrastructural power projection. The initial economic rationale for infrastructural expansion was driven by economic overcapacity and the rebalancing of the Chinese economy (Ye 2020; Tekdal 2018). I have argued that after this initial disorganized movement towards new infrastructure building, the CCP set out on this rebalancing and infrastructure push by seizing the opportunity to frame the BRI as a new wave of socialist reformation that reinstates peaceful coexistence as a key tenet of Chinese foreign policy (Dunford and Liu 2019). In building the infrastructure and by creating new gateways for trade flows through the broader Chinese supply chain, the Chinese further legitimated their economic model at home and abroad by providing

opportunities for local Chinese firms to internationalize and receiving countries to increase FDI in their attempts at industrialization.

However, the BRI has had less than the projected success in certain regions. This has led commentators to question Chinese intentions in the global south. These failures have framed the BRI in geoeconomic terms, requiring a response by hegemonic states. They have responded with what Gabor has called a 'wall street consensus', that seeks to de-risk private sector investment in developing country infrastructure (Gabor 2021). However, although this de-risking approach, and the announced infrastructure initiatives have gained traction in the media and policy circles, the reality is that the number of investments has been low, and projects have not been realized[59]. This failure further legitimatizes the Chinese approach.

5.5. Conclusion

This article has addressed geoeconomic competition surrounding shipping infrastructure through the lens of infrastructural power. China's rise has led to a refocusing on the management and control of transport infrastructure. Infrastructural power projection through infrastructure building and management concerns the provision of connectivity. The infrastructural power of shipping infrastructure in international politics implies the provision of capital and services to gain influence on receiving states. Nonetheless, complications in providing and managing infrastructure and the less than favorable results in some of the projects showcase the downsides of the projections of infrastructural power by China and others.

In arguing for the role of infrastructure in political conflicts, this article has showcased the effects on maritime connectivity of Chinese investments in ports. Success cases of Chinese port takeovers exist, integrating regions further into the global economy. This does not mean that BRI projects always provide direct economic benefits to low-income countries. Gwadar shows that the creation of the port and the broader Gwadar industrial zone has not provided distributional benefits for the community surrounding the port to date. The problem lay in the decisions of shippers and shipping companies that the port of Karachi is a better option to service the Pakistani economy. Local politics matters in infrastructure projects and

[59] See for instance: https://foreignpolicy.com/2023/01/10/europe-china-eu-global-gateway-bri-economic-development/ or https://www.scmp.com/news/china/diplomacy/article/3204431/one-year-eu-alternative-chinas-belt-and-road-fails-deliver

infrastructural power projection. Although the BRI has become highly politicized, its effects are mediated by local political economies, the strategies of shipping and terminal firms, and the other key aspects of connectivity such as underlying transport demand. Furthermore, Chinese SoEs generally collaborate with the broader shipping industry in these projects, which has its own goals and strategies. This means that as an infrastructural power tool, shipping flows may be less powerful than dollar hegemony, where the US can unilaterally sanction stakeholders who use their currency. While in the case of Chinese shipping infrastructure, the Chinese government needs to accommodate local conditions for projects to be successful, and to gain influence.

Many of the BRI projects started before its formal launch, particularly given the guidelines of the 'going out' strategy and the need of firms for further expansion in the face of decreasing profitability within China. China keeps its strategic framework quite open, to both have strategic flexibility in the success or failures of projects, but also to add to the project geographically or thematically. Not only has the project expanded geographically beyond the historical silk road of ancient times, but strategic frameworks such as 'Artic Silk Road', 'Digital Silk Road' or 'Health Silk Road' have appeared to frame most Chinese international foreign policy within the BRI framework. In. this way the framework can encompass changing market conditions and developing political strategies. Now, for example, much is being said about the BRI declining and the reduction of lending and the number of projects abroad. This narrative omits two things. First, that projects are starting to be operational, creating outcomes beyond investment notices, and that the BRI has been engrained in the Chinese constitution and personally attached to Xi Jinping. Albeit in a toned-down form, the BRI cannot 'fail' in the eyes of Chinese policy makers.

The new infrastructure initiatives by the G7 and the EU that attempt to compete with Chinese infrastructure projects are still in development. If these new initiatives provide more options to low-income countries, while also tackling the still large global infrastructure gap, this could provide development opportunities. If the projects become financialized and loaded with conditionality these initiatives are likely to falter. In the end this geoeconomic competition will benefit those low-income countries with sufficient capabilities to balance the infrastructural power projections of all stakeholders while inducing the local economic gains the new infrastructure can provide.

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Part 3. Concluding remarks

Part two provided the core articles of this dissertation and presented the key arguments and empirical material. This last part provides the concluding remarks. It summarizes the main findings and contributions, draws out broader implications, and identifies research avenues within International Political Economy to address shipping markets, global supply chains and geoeconomic competition.

Chapter 6. Conclusion: Who rules the waves in the 21st century?

This dissertation has provided a political economic analysis of Chinese transport investments that captures and synthesizes the rapid increase in global geoeconomic tensions throughout the three and a half years of doctoral study. It does so by analyzing the underlying political economic forces that have transformed global transportation markets, on the back of accelerating consolidation dynamics in the industry and an expansion of transportation markets into new geographies as China's economy develops. I hope to have provided a nuanced picture of the development of China as a modern maritime nation, exploring its national political economy, sub-national models and comparing its experiences with experiences in the rest of North-East Asia and the world. At the same time, I have tried to distill the geoeconomic implications of a rising China, focusing on the ways in which the BRI projects infrastructural power, while careful of not falling into grand geopolitical narratives, both in China and western countries, which overemphasize the political character of infrastructural projects rather than political economic implications and outcomes. In these concluding sections, I draw out the academic implications of the findings of this dissertation and suggest some ways forward for research on the BRI, China's role in global transportation infrastructure and markets, and the political economy of the current geopolitical moment.

6.1. The rise of China as an economic and political maritime power

The explosive economic development of China since the reform and opening-up period has remade the global economy. Driven by political reform and a change of objectives from socialist self-sufficiency to capitalist development, as well as by a global economy at the peak of neoliberal globalization after the fall of the Soviet Union, China positioned itself as the factory of the world over less than three decades. As chapter three of the dissertation explores, this was imprinted in state spatial strategies (Brenner 2004), which connected coastal China with global production networks, while also increasing inequalities between the coastal and inland regions of China (Chapter three of this dissertation). The coastal regions of China, and particularly the provinces along the Pearl River and Yangtze River deltas, grew rapidly and these provincial governments, after initial central

government support, started crafting their own economic strategies and developing strategies to further connect into the global economy (Ang 2016; Ye 2020).

Maritime industries comprised a key lever of economic growth in both river delta regions. Emulating the successes in maritime industry and heavy industry development in Japan, South Korea, Taiwan and Singapore, these regions recognized that rapid industrialization necessitated both rapid infrastructure development, development of heavy industries and the facilitation and subsidy of trade costs to ensure initially uncompetitive exporters could succeed globally. All of this necessitated the growth of Chinese shipping industries.

The initial strategy was to completely protect Chinese outbound cargoes by mandating that they be carried only by Chinese carriers and in Chinese built ships (Heine 1989). However, the strategy quickly changed as Chinese industrialization rapidly accelerated and Chinese transport firms could not keep up with rising demand for transport services. Nonetheless, enough transport demand was being created for Chinese shipping firms not to be crowded out by more established foreign players. Chinese shipping firms became globally competitive, with COSCO now the 4th largest shipping firm in the world.

After this initial industrialization, the engines of the Chinese economy started losing steam as the global economy took a major dive in the wake of the global financial crisis of 2008. The Chinese government realized its overdependence on foreign markets and started guiding the economy towards servicing its own domestic market. This guidance involved several economic rebalancing efforts pushing the industrial development of inland regions and the shift in the coastal regions towards consumption-based innovation economies. This shift required a new 'division of logistical integration' as argued in chapter three, which drove investment in new logistics infrastructures inland and forged new global connections between the inland regions and global production networks. It also led to the development of tightly integrated and innovative logistics systems primarily in the coastal regions and dedicated to e-commerce and services flowing through private firms such as Taobao and JD.com[60].

[60] The strength of the Chinese economy within digital markets, as well as state support, has provided other competitive opportunities for shipping companies as they digitalize. For example,

The key point is that the economic development trajectory of the Chinese economy matters and provides the basis of an explanation and understanding of the strategic decisions being made by governments and transport firms regarding the new geography of global supply chains. As these changes unfolded however, the continued economic rise of China started to be seen as a threat to American economic hegemony. Geoeconomic tensions arose amid geopolitical narratives of a more aggressive China in the international sphere. This has brought new political economic dynamics to the shipping industry, with implications for shipping markets that are replete with uncertainty regarding the direction of the global economy amid pandemics, climate change, and a shifting geoeconomic environment. This is the focus of the next sections.

6.2. New global shipping industry dynamics and shifts in global supply chains

The development strategy of China is an important factor determining the trajectory of the shipping industry, but not the only factor. Rather, the development policy of China, albeit a major factor as a massive importer and exporter of goods, is just one of many macroeconomic factors conditioning processes of change in shipping markets. Of course, as trade growth stagnated in the global economy in the aftermath of the global financial crisis, shipping also became a losing business, something which has until recently defined the industry (Monios 2022). This led to significant consolidation amidst persistent overcapacity in liner shipping that was extenuated by competition among shipowners for market share and reflected in investment in ever larger ships. This period of overcapacity and consolidation in liner shipping brought freight prices to very low levels.

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the GSBN network centered around blockchain technology provided by Tencent to facilitate electronic bills of landing within COSCO shipping, is now the sole operator offering this technology service after Mærsk's partnership with IBM (the Tradelens platform) shutdown due to low profitability. Similarly, China is also a leader within automation in port terminals given linkages to electronic and digital firms within China. The international politics of digitalization within the transport sphere, are critical as geoeconomic contestation between China and the West continues. For example, crane manufacturer ZPMC has been accused of spying through ship-to-land port cranes, as these have sensors to read container numbers, dangerous goods labels, and relay information about the stowage location of containers on ships. Of course, these accusations are blown out of all proportion. That information is more easily accessible to the Chinese government by other means as China handles over 50 million TEU in its national ports every single year. Nonetheless, such accusations can provide opportunities for competitors, such as South Korean crane manufacturers that can service markets fearful of Chinese technology.

Facing highly concentrated shipping markets, and a consumer base looking for more visibility and control over cargoes, shipping firms have started to verticalize into broader logistics services. Logistics services is a less consolidated industry with more growth opportunities. This has meant shipping lines investing in port terminals, ports hinterlands in the form of warehousing and trucking, as well as multimodal transport (airfreight and train freight) and even last mile logistics (Paridaens and Notteboom 2022). At the same time, very large vessels in the shipping industry have led to few ports becoming key hubs in the global shipping network, giving more power to the big shipping lines in their choice of which ports to call at (Notteboom and Rodrigue 2023; 2012; Danyluk 2019; Jaffee 2019).

In turn, the reduced number of key hubs for liner shipping has led port cities to seek investment and act to attract footloose shipping firms to their localities for logistics development (Danyluk, 2019). Given these structural pressures from shipping markets, synergies arise between Chinese strategies of shipping internationalization and port-city strategies to attract investments into their ports. As such, a key point argued in this dissertation is that even when political motivations for new shipping investments exist, an economic rationale underpins the many investments in port cities around the world from Chinese firms as shipping lines compete to verticalize and became door-to-door logistics providers (chapter four).

State and holistic planning continues to be the norm in the Chinese maritime industry. The 14th Five-Year plan focused on innovation, the green transition and servicing the needs of domestic consumption, putting less weight on increasing international trade. These overall guidelines are then translated by provincial, city and port authorities to continue their development. Thus, the integrating of port groups and the development of green and digital ports will continue, while the growth of overseas investment by Chinese port firms will continue to be aligned with China's overarching strategy of redirecting the focus to domestic consumption through its dual circulation strategy.

At the same time, Chinese policy makers are pushing the industry into new growth areas within innovation and sustainability. For example, the 'Green Silk Road' has become a discursive economic diplomacy tool pushing for sustainable development and green growth and harmony, with several projects under the BRI being also

considered eco-projects[61]. Environmental issues in China related to shipping are similar to those in the rest of the world. However, priority seems to be given to health and citizen annoyance (smell, congestion) rather than more general climate and biodiversity change, which could jeopardize financial gains. Most port stakeholders also point out that mitigation strategies can improve reputation, which can result in expanded market share and more financial gains.

The general perception is that European ship owners, ports and liners have a higher level of ambition in becoming sustainable and addressing the issues listed above. However, Asian shipping lines were first movers in building ships for their fleet with more sustainable technology in 2009 (Talley 2009, 166–67), and COSCO owns the first fully electric feeder containerships. Further, technological projects continue to be driven by, or with large participation from, Asian countries.

Ships are major sources of pollution in ports cities. Since 2006, the Chinese government has attempted to increase environmental protections through several policy initiatives. Specific policy action to shipping such as the Green Port program, which certificates port environmental performance, based on specific standards has improved sustainability in Chinese ports (Aritua et.al. 2022). The use of shore power has been a key objective in Chinese ports, with plans by the MoT targeting that 90% of major ports in China provide shore power by 2020 (Aritua et.al. 2022:86). Another key initiative is ship emission control areas, first set up in the Yangtze River Delta (2016) and Pearl River Delta (2017) and then extended to all coastal waters in 2019. This policy demands that ships switch to low sulfur fuels when navigating the controlled areas. Finally, the transformation of terminal equipment from oil to electrical equipment has also benefitted the environment around ports, while motivating innovation of port machinery suppliers, another large marine industry in China. As such Chinese leadership within maritime industries is not only tied to the economic power of the Chinese political economy. It is evolving to take a lead on sustainability markets.

In addition to competition on economic terms, other issues such as innovation surrounding shipping fuels for the energy transition and on environmental concerns regarding leading customers' globe spanning supply chains also affect the structure

[61] See: https://www.theguardian.com/world/2022/sep/20/china-plan-green-silk-road-environmental-promises

of global shipping networks. This coupled with geopolitical concerns means that global supply chains are shifting. This shift is not new, but Covid-19 has accelerated the decisions by many supply chain actors to re-shore or near-shore their activities (Haakonsson and Jensen 2021). However, this is easier said than done, not only because for many firms the Chinese market now represents a large share of their consumer base, but also because of the limited options to find equally ideal combinations of industrial capacity and logistical efficiency. Paradoxically, as discussed in chapter five, de-coupling from China necessitates infrastructural expansion and the type of investment organized within the Belt and Road Initiative framework. Industrial parks, logistical infrastructures and increased energy capacity are all needed in new sourcing countries that partially replace China as the main sourcing destination in the global economy.

Even as the de-coupling continues, this dissertation contends that the recentering of shipping networks towards Asia is evident (Saeed et.al. 2021), providing more power to Asian nations and firms in the global shipping regime. At the same time, the responses to this shift beget more state intervention in shipping and reinvigorates the Asian model of economic development within infrastructure, shipping, and logistics. Nonetheless the shift in geoeconomic calculations also brings with it uncertainties to the global economy, as discussed in the next section.

6.3. Changing geoeconomic calculations and consequences for global shipping

Chapter five tackled the geoeconomic impacts of the Belt and Road Initiative, coining the way in which the China model gets transposed in third countries a form of state capitalist infrastructural power projection. This infrastructural power serves to legitimize the Chinese model (as discussed in chapter five) or as addressed in chapter two, the broader Asian model of state-led infrastructural development. It also opens new frontiers in global capital accumulation and capitalist development, with economic gravity moving towards Asia.

This projection of infrastructural power has also given rise to strategic connectivity politics and incited reactions from global and regional powers such as the US, Europe, India, and others. The reaction of competing states was at first positive or at least cautious, particularly that of European states, as many joined the multilateral agreement on the BRI. As years passed the rhetorical attacks against the BRI and efforts to change perceptions globally on the BRI accelerated. India and the USA

accelerated public attacks on the BRI as unsuccessful projects grew. Paradoxically, the failure of BRI projects has resulted in a proliferation of global infrastructure initiatives to challenge the BRI, including the Blue Dot Network, The Build Back Better World initiative from the G7 and, most recently, the EU's Global Gateway initiative (Schindler et.al. 2021).

These initiatives reflect a general growth of shipping infrastructure projects and regional transport planning initiatives globally. Commonly referred as corridor initiatives, these initiatives focus on improving infrastructure between states to optimize the efficiency of trade. There are over 100 or so corridor initiatives around the world that have met varied levels of success (Schindler and Kanai 2021). Regional examples such as the European TEN-T programs, focused on connecting European infrastructure surrounding Europe (see chapter four), or the LAPSSET corridor headed by Kenya in partnership with Ethiopia, Uganda, Rwanda, and Congo are examples beyond the global initiatives in the headlines (Schindler and Kanai 2021; Schindler et.al. 2021; 2022). A supply chains continue to shift; these projects will continue to receive attention as a lever to attract manufacturing firms relocating from China into location connected by these corridors.

The US has positioned its infrastructure standard setting initiatives in direct contest with Chinese programs. Initially, the US shied away from the direct provision of infrastructure globally. Rather, the US took a 'standard setting' approach. This initial period saw the creation of the blue dot network, an international standard system that provides infrastructures with a certification of quality: financially and environmentally according to the US and other blue dot network members (Ashbee 2021). Blue dot network certified infrastructures are primarily non-Chinese, although generally infrastructure managers at ports strive to satisfy American standards broadly as a requirement to trade with the US[62]. However, the fact that most trade infrastructures are gravitationally pulled towards China, meant that the blue dot network failed to constitute a substantive response to the BRI. Therefore, the US spearheaded the creation of the Build Back Better world at the 2021 G7 summit, with the aim of building infrastructure globally to rival the BRI. Little is known about this initiative, which at another 2022 G7 summit was renamed

[62] For example, terrorism security standards in international trade zones and ports trading with the US are a way of influencing infrastructure building and management.

"Partnership for Global Infrastructure and Investment". Its objectives remaining unclear[63].

Until recently, the EU has followed a more conciliatory approach to the BRI. The EU has an active connectivity forum with China and has over time through this forum explored partnerships and synergies between the BRI and the TEN-T regional infrastructure program, attempting to foster common projects between China and Europe, particularly in the Balkans[64]. Furthermore, analyses have showcased how the BRI also enhances European connectivity with Asia and provides for the diversification of supply chains in Europe (Chapter four; Dunmore, Preti and Routaboul 2019). It is for this reason that the EU has been less critical of Chinese actions through the BRI. The EU has recently moved into a more confrontational 'alternative to the BRI' stance, changing from discussing broadly connectivity to declaring its own global infrastructure initiative[65]. This shift in approach has been in the works for some years in the European bureaucracy. At the same time, the European External Action Service (EEAS) has been building connectivity partnerships with Japan and India at a higher diplomatic level than the connectivity forum with China. The EU also thinks that the problem is not that they do not provide capital for projects in the global south, but rather that they do not communicate about their projects as much as others. Europe in 2021 launched the Global Gateway initiative as way to highlight the projects it executes, and to provide new financing for projects, though through traditional overseas development assistance collaboration and public private partnerships, rather than the bi-lateral financing China promotes through the BRI.

Recently, regional powers such as Japan have also begun to launch their own projects. Japan has been influencing infrastructure building in the South-East Asian region through the Asian Development Bank (ADB), which, although seen in competition with AIIB (Asian Infrastructure Investment Bank, the Chinese lead development bank), has similarities to the Chinese approach to infrastructure ODA (Katada and Liao 2020). Furthermore, Japanese capital has been part of several BRI projects, including the recently open high-speed railway between Jakarta and Bandung in Indonesia. This showcases possible positive synergies between

[63] See: https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/26/fact-sheet-president-biden-and-g7-leaders-formally-launch-the-partnership-for-global-infrastructure-and-investment/

[64] See: https://eeas.europa.eu/delegations/china_en/15394/China%20and%20the%20EU

[65] Statements based on interviews with officials at the EEAS in autumn 2021.

approaches and the need to de-escalate grand geopolitical narratives regarding the main motivation for infrastructure investments and nuance the overall discussion of the BRI. This has been one key objective throughout this dissertation.

It remains to be seen how these new infrastructure initiatives will shift global supply chains or connect/compete with BRI projects, especially in a moment where funding for BRI projects is decreasing, while new initiatives are starting. The infrastructural power of such projects is difficult to presuppose, but the fact that all other major powers have entered the strategic connectivity competition implies that they consider Chinese expansion globally as undesirable. Broadly speaking, this growth of infrastructure projects and the range of partners to choose from provides opportunities for developing countries to link better to global markets while increasing their influence and agency. In a way, and stemming from the East Asian experience of development, the current geoeconomic competition moment may provide new windows of opportunity for developing countries to industrialize, opening policy space for catch-up industrialization as global supply chains shift.

6.4. Chapter Conclusion: Bringing shipping back into IPE

As stated in the first chapter of the dissertation, one main argument of this dissertation is that although Chinese state-capital relations are qualitatively different from those of other maritime nations, the BRI and China's rise in the shipping industry does not pose a threat to the global shipping regime. In the current global shipping regime, the state has been pervasive, and continues to play a central role. As such, the challenge China poses to the global shipping regime is not one of a complete reshaping of power relations at sea. Rather what we see is a return to past statist forms of engagement, such as direct support of national shipbuilding industries and new state practices like the Belt and Road Initiative to finance, build and operate infrastructures abroad. These new state practices reflect both domestic political economic pressures on Chinese capitalism and structural pressures from capitalist markets that also drive other states to action. This creates the possibility of synergies between different forms of state capitalism, though also opening possibilities of conflict. In the realm of international politics, the global shipping regime finds itself, similarly to other sectors of the economy, caught in a brewing geopolitical confrontation between China and those who see China as a threat. In confronting China, these states have also turned to statist strategies to defend their industries and invest abroad, adding more impetus to the statist wave in the global economy.

For shipping and transport firms, although many have argued that geoeconomic competition is a negative trend, the covid-19 pandemic has shown that 'frictions' are profitable for transport firms. As such, a new cold war geopolitical moment may provide opportunities for profit as global supply chains diversify and expand into new frontiers as a slow and (only) partial decoupling from China occurs. For International Political Economy, this dissertation has demonstrated the importance of studying logistics, shipping infrastructures and shipping markets to understand the global political economy. This is due to the industry's key role in fueling and servicing and transforming capital accumulation and, two, its infrastructural position at the center of major power conflicts between states.

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Kan giver-idealtyper forklare støtte til velgørenhed og understøtte relationsopbygning?

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Dansk CFC-beskatning
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Et oversættelsesteoretisk perspektiv på strategisk arbejde

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Monografi om dobbeltheden i tænkning af strategi, dels som vidensfelt i organisationsteori, dels som kunstnerisk tilgang til at skabe i erhvervsmæssig innovation

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