Effects of BRI strategy on Mediterranean shipping transport

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Abstract

In 2013 Chinese government unveiled one of the biggest transport plan schemes worldwide: the One Belt One Road (OBOR) strategy, now called the Belt and Road Initiative (BRI). This scheme is linked to the development of a group of specific transport and logistics corridors that encompass three different continents (i.e. Asia, Africa, and Europe) with both land transport and maritime solutions. Both these alternatives are expected to greatly impact on the maritime transport between Far East and Northern Europe through new port investments (e.g. Piraeus, proposed Venice container offshore terminal) and providing rail alternatives (e.g. Beijing-Hamburg train currently under experimentation).

These modifications of current transport patterns might drastically change the overall organisation of the shipping services in the Mediterranean, increasing competition of transport alternatives (e.g. rail) and promoting the nodes included in the BRI. Thus, the current study has the goals of discussing effects of BRI on current maritime patterns with a specific focus on the effects into port competition within the Mediterranean area.

1. Introduction

Over the centuries, maritime transport has often been promoted as the only transport alternative capable of competing for large volumes of traffics in long distance routes (e.g. Stopford, 2009). Together with these peculiar characteristics, all main operators were used to compete freely and independently in order to attract customers and serve cargo-owners worldwide. The introduction of container shipping – thanks to vertical and horizontal integration strategies – drastically changed the last peculiarity of the shipping business, with the need for aggregations, as for the case of M&A and alliances described in Midoro and Pitto (2000). The wave of consolidations – that started around the end of the '90s and it is currently still ongoing – drastically changed the shipping market and even if in container liner shipping seems to impact more (with main 3 alliances controlling more than 90% of main routes, according to Drewry, 2018), other liner markets (e.g. short sea shipping) and bulk shipping (e.g. with the development of pool system). The related market concentration on the sea side pushed several companies to compete also at land side, with vertical integration strategies that often involve not only terminal operations but land transport and logistics as well (e.g. Notteboom et al., 2017). The competitive advantage has been then moved from the port-to-port services to the door-to-door intermodal transport, pushing national authorities to provide subsequent infrastructure and regulatory improvements (e.g. rail and road connections with ports, automated gates, e-documents, single window), in order to increase the possibility to promote such kind of integrated

transport solutions. Thus, the need for integrated regional transportation systems generated the need for integrated transport policies that both increased regional accessibility but also allowed operators to improve their integrated networks. Trans-European Network (in European Union) are an example of such policy, with the creation of core ports and related major logistics corridors (e.g. Bottasso et al., 2018). Nevertheless, while most of these projects are at regional level, the Belt and Road Initiative, promoted by Chinese institutions, is currently the only one having a worldwide scope.

In fact, the Belt and Road Initiative (BRI) evokes the development of a modern "Silk Road" connecting China with other major partner countries within and outside Asia (mainly located either in Europe or in Africa). Started in 2013 with the label of the "One Belt, One Road" (OBOR) project, this integrated transport strategy has been substantially developed thanks to the financial initiative of Chinese institutions. Starting from 2016 the initiative was opened to the support of international partners, mainly connected to the recently funded Asia Infrastructure Investment Bank: more than 900 bln USD project value has already been approved (EBRD, 2018).

According to Cheng (2016), the huge financial effort promoted by Chinese institutions has several goals but the main one is obviously connected to the promotion of Chinese companies worldwide, granting them a competitive advantage thanks to the investments in strategic infrastructures. While several countries highlighted the potential effects on fair competitions (e.g. Herrero and Xu, 2017), most of the countries welcomed new investments in the infrastructure market that might drastically change current transport patterns and competition. Among the regions that will probably see the most effect of the BRI there is the Mediterranean basin that will experience a series of investments at both port and rail level together with some special trade and financial agreements. The new logistics corridors might then affect not only the shipping industry in the Mediterranean but also the overall transport industry at European level, as discussed by Yang et al. (2018a). Concerning this latter issue, it is quite important to highlight how Europe seems to be central to the BRI development, being the other end of both the "road" (i.e. the land infrastructure) and the "belt" (i.e. the maritime services) of the overall strategy. Moreover, within the BRI development several traditional peripheral markets (e.g. Central Asia, Eastern and Central Europe) will be finally efficiently connected to main world routes. In particular, Eastern and Central Europe might be served efficiently by both the land and the maritime side of the BRI. Whoever will be able to perform services exploiting the advantages of these new corridors, will therefore assure an incredible competitive advantage for the near future. While current published papers on the BRI (e.g. Wang et al., 2018a, 2018b; Zheng et al., 2018) focused on specific transport projects or on the optimization of transport patterns, current paper will then discuss potential effects of current and foreseen investment on the Mediterranean shipping market, with a specific focus on the container shipping.

The aim is then to assess if current investment could positively affect future transport market competitiveness.

The paper is structured as follows. After this first introduction, Section 2 will briefly describe the BRI development and its goals, Section 3 will then assess main transport projects in the Mediterranean area, discussing how this might affect current shipping and transport solutions. Section 4 will then address subsequent policy issues, addressing main conclusions.

1.1 The research approach

In order to achieve the research goal a three-phase desktop analysis has been developed, following the triangulation research philosophy. As shown in Figure 1, the research has been developed through

a literature review, an analysis of media news on potential projects, and then a confrontation with public data from main market operators. Thus, first main literature review has been assessed, using the public database Scopus. In order to focus on main papers, a structured research has been developed using “One Belt One Road” or “Belt and Road Initiative” as search keywords. 209 and 278 papers have been found, respectively. Most of the papers actually assessed the political and financial implications rather than the transport related issues.

Figure 1 – The research approach

Given the variety of topics discussed, a further selection has been developed, adding a second search code (i.e. “Transport”) to the previous two selections. This operation resulted in a more focused group of researches of 25 and 23 papers, respectively. All these papers (summarized in table 2) have then been used for better understanding the implications of BRI on the transport network and on the Mediterranean area in particular.

As it is possible to see from the table, all the papers have been published within the last 4 years and most of them focus either on specific case studies (mainly located in Asia) or general network issues. These latter aspects are quite important since only a limited number of papers assessed the impacts of BRI projects on European logistics (among the exceptions, Yang et al., 2018a; Nežerenko and Koppe, 2017) and none of them discuss the consequences of BRI in the Mediterranean area. This latter element generates a limited knowledge on the effects of the several projects under discussion on the current market structure. Moreover, the only highly cited papers (i.e. Ferdinand, 2016; Fallon, 2015) are actually again discussing political implications of the BRI strategy with only few examples of the transport impacts. The abovementioned elements are probably connected to the novelty of the investments in the European continent and with the nature of the Belt and Road Initiative as well. For this reason, the media assessment and the industry analysis have been developed, in order to include latest investments in the assessment of the BRI consequences on Med market competition.

Table 2 – Assessed papers

Area of study	Main discussed topics	Mention of "Europe"	Papers with "BRI"	Papers with "OBOR"	Source
General Logistics	Improvements on current logistics services or intermodal transport along parts of the BRI. Most of the paper actually discuss specific case studies or compare current situation to possible future scenarios.	4	10	8	Sheu and Kundu, 2018; Kuzmicz and Pesch, 2018; Liu et al., 2018 ; Choi and Chen, 2018; Nazarko et al., 2017; Xu et al., 2017 ; Nezerenko and Koppel, 2017; Lim et al., 2017; Want and Yau, 2018; Chhetri et al., 2018; Hou, 2018; Sterling and Liu, 2018; Zhang, 2018; Ji and Sun, 2017; Zhang, 2016a; Lau et al., 2018; Bekturganov and Bolaev, 2017
Maritime Silk Road - Shipping	Most of the studies discuss potential optimization processes (e.g. routing) connected with certain BRI investments (e.g. Kra Canal, integration of services). Some of the recent works focus on the possibility to consider services offered within the BRI as complimentary among each rather (i.e. Rail + Ship) rather than in competition.	3	5	6	Yang et al., 2018b; Heng and Yip, 2018; To and Lee, 2018; Saha, 2018; Hou, 2017a; Huo, 2017b; Zeng et al., 2018; Wang et al., 2018; Du et al., 2018; Qiu et al., 2018; Ding et al., 2018
Not transport focused	Most of the studies in this category discuss transport as part of the overall BRI strategy but they mainly focus on other aspects of BRI, such as FDI, local development, legal issues, and political consequences.	5	12	10	Yu and Chang, 2018; Rozov, 2018; Malle, 2017; Calabrese, 2017; Mednikarov et al., 2017; Sharif et al., 2017; Ferdinand, 2016; Huasheng, 2016; Chia, 2016; Mikheev et al., 2015; Dave and Kobayashi, 2018; Napasirth and Napasirth, 2018; Ismailov and Papava, 2018; Li et al., 2018b; Lavut, 2018; Herrero and Xu, 2017; Li et al., 2017; Li and Schmerer, 2017; Weihai, 2017; Suocheng et al., 2017; Chen, 2017; Fallon, 2015
Focus on railway corridors	Most of the studies focus on the description and assessment of new rail alternatives linked to BRI development	2	3	3	Li et al., 2018a; Bao, 2018; Lapidus and Misharin, 2018; Jiang et al., 2018; Zhu and Vadim, 2018; Zhang, 2016b

Table 2 shows different interesting facts concerning the papers on BRI currently published: almost 40% of the papers do not discuss as main paper focus transport related issues but only use transport as example. These papers are mainly socio-politics related and they are mainly interested in discussing the evolution of BRI rather than transportation aspects. Moreover another 30% of the paper focus on general logistics aspects, only partially related with the maritime industry: this latter sector seems to be marginal – at least until now – in the overall debate on BRI. Looking at the geographical scope, only a quarter of the currently published papers discuss – at least partially – effects of BRI on European regions (of which only 3 papers are within the maritime literature). This fact might be related to the recent stress on the European investments while most of the initial projects have been mainly developed in Asia. Interestingly, no papers are currently specifically addressing African projects, despite the many ideas currently under-development. Eventually, from a development point of view, it is interesting to notice how the two terms OBOR and BRI are currently used with no differences, despite the Chinese government is now pushing through the use of the latter (considered more politically correct and capable of attracting multinational support) rather than the former one that was initially seen more as a unilateral action.

2. The Belt and Road Initiative

In accordance with several papers (e.g. Huang, 2016; Cheng 2016), BRI has a plurality of goals that are mainly connected to political and economic issues (e.g. opening of developing markets for Chinese companies, economic cooperation). Despite the role of these reasons in the BRI related decision making process, from a transport perspective, the BRI strategy will increase the connectivity through specific transport investment projects and long-term collaborations between China and several Asian, African, and European partners. Thus, the BRI differs from other transport investment strategies (e.g. the TEN-T) because it is not looking at increasing cohesion among different regions but it focuses on boosting the connectivity of regions that are currently included in selected trade lanes or forming "priority targets". In one of the official documents describing the vision of BRI (Huang, 2016; Cheng 2016), president Xi, delineated the characteristics of the commercial partners and regions that might be included in such group (i.e. political and economic conditions) even if an official list of countries does not currently exist. Within the description, the need to invest in order to bring long term advantages for the Chinese communities is one of the most stringent one. Thus, while often BRI is connected to investment on transport infrastructures, these investments are normally linked to a "foreigner" (from the receiver viewpoint) strategic advantage. Therefore, even if main projects are strictly linked with integrated logistics chains, these should be considered either strategic to Chinese companies or having a substantial industrial link for generating future trade flows. While the scope of the initiative is not only infrastructure related, overall, BRI is mainly developed through land (i.e. both road and rail) and maritime integrated transport corridors, having a variety of specific international projects that aims at connecting different strategic markets or to bypass potential bottlenecks (e.g. Kra Canal) in the aim to increase the security of energy sources.

Given the nature of the initiative, the development of the projects is normally not related to specific policy or company interventions but it strongly depends on bilateral – and in a few cases multilateral – agreements between Chinese institutions and other national authorities. For this latter reason, BRI is a discontinuous and heterogenic strategy that – even if it is based on an overall view – it normally does not promote specific transport solutions but general logistics corridors.

Thus, often BRI is developed through differentiated solutions and ad-hoc investment tools connected to the market conditions characterising the region under investment. This was the case of the massive COSCO investment in Greek ports during the financial crisis (2012-2016) as well as the foreseen investments in Sri Lanka container hub in 2016-17. Most of the abovementioned solutions are often construct as a phased privatisation process, with concession agreement or Build-Operate-Transfer (BOT) solutions that might then become fully privatised infrastructure if certain conditions are met (as in the case of Piraeus and most of the Pakistan and Sri Lanka investments).

Some of the abovementioned policies are also linked to new infrastructure solutions, such as the foreseen Kra Canal in Thailand (Zeng et al., 2018) that will help bypassing the Malacca strait reducing shipping time between Europe and Asia of up to 5 days.

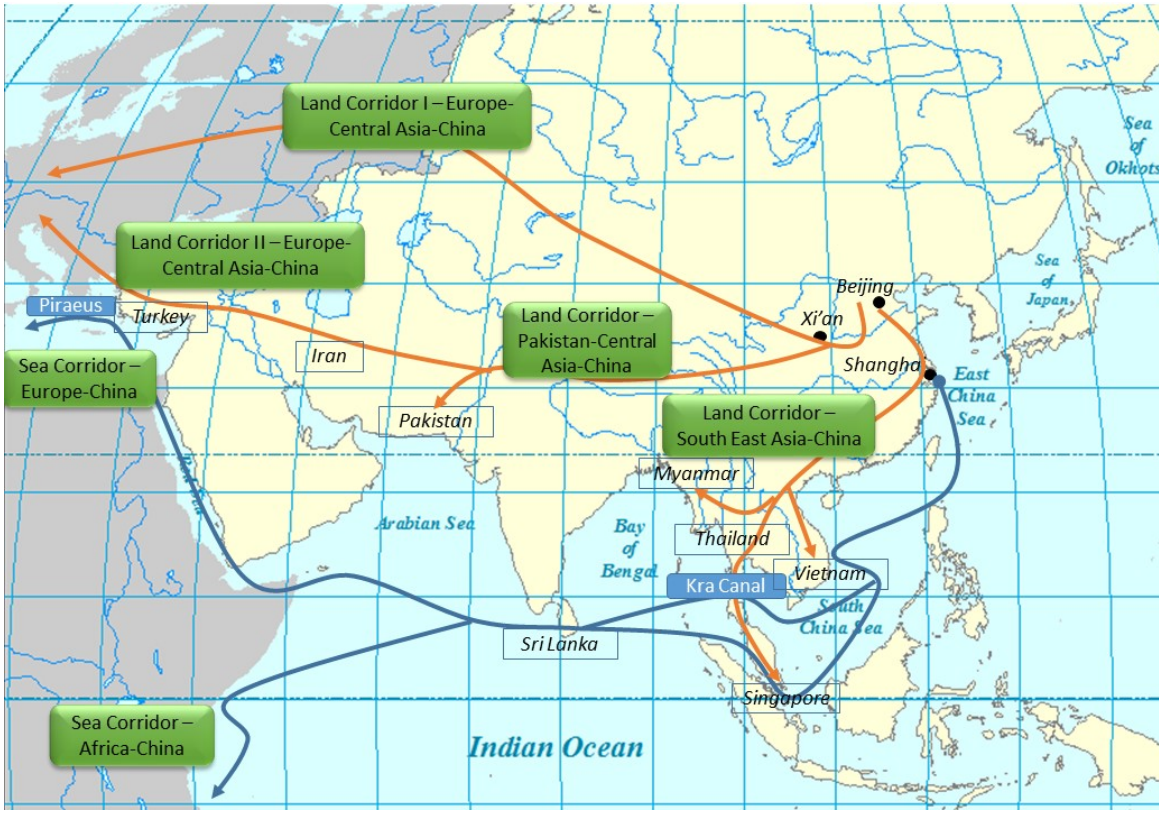
From a transport point of view, BRI is based on a multitude of projects within three main pillars: the Intra-Asia corridor (mainly through land infrastructures), Europe-Asia corridors (mainly through maritime investments but also with an improvement of rail connections, especially with South East and Central Asia), and the Asia-Africa corridors (mainly through maritime investment and logistics improvements in African countries). Figure 2 sums up these main logistics corridors.

Considering the Asia-Europe part of BRI, it is divided in three distinct sub-group of projects: a rail corridor - currently in operation - that uses part of the Russian rail network, connecting Chinese main production sites with Western European countries. The aim of this corridor is to improve the competition of the rail solution for many added value trades and it is currently operating low quantity of cargo reducing of more than half the transportation time between China and Europe. Despite some limited numbers, Yang et al. (2018b) highlighted as in 2017 3637 trains – divided in several rail services – connected Chinese cities with European locations (mainly in Germany and Eastern Europe), against the only 623 trains in 2015 (with only eleven services) and 11 trains organised in 2011 (Yang et al., 2018a).

The second land corridor, which should pass through Iran and Turkey, is under development and the related international agreements are still to be signed. In principle it should guarantee a competitive road and rail solution for the connection among Central Asian countries and both China and Eastern Europe.

The third Europe-Asia corridor is the maritime one (i.e. Maritime Silk Road) that will see an intensification of the flows between Chinese ports and European ports with Chinese companies already involved in investment in transhipment hubs along the main route (such as Sri Lanka and Piraeus, in Greece) in order to acquire a regional competitive advantage in serving local regional traffic. The abovementioned Kra-Canal is also another element included in this part of the strategy.

Figure 2 – BRI corridors



Source: Bottasso et al., 2018.

In respect to other transport strategies, BRI is different not only for the aim to achieve but also for the governance and the investment patterns. The governance of different projects is often linked to specific international agreements, thus promoting differentiated solutions that might go from a simple public-private collaboration to a more top-down approach in which the foreign investors (i.e. Chinese companies) control all the construction and management of the project with low involvement of local partners. Within the Europe-Asia corridors, all different solutions have been deployed, with most of the infrastructure given via concession agreements – at least at the beginning, as in the case of Piraeus port – but most of the managerial activities (e.g. promotions of specific logistics and technological services) directly run by private companies.

Another issue is related to the investment pattern that affects every consideration on the BRI strategy and on potential market effects. Given the relative novelty of the BRI (i.e. from 2013 onwards), only few projects have been completed while most of them are either in a development phase or still in a bargaining phase with the relevant local authorities. Moreover, most of the completed projects are actually pure monetary investments headed to control and/or expand existing infrastructures, as in the case of the port sector in both Asia and Europe. An example is again the port of Piraeus, in which COSCO (the biggest Chinese shipping operator) well before the BRI (i.e. in early '00s), through concession agreements. Nevertheless, the need for privatization after the Greek political turmoil and the starting plan of BRI made COSCO entering in the Piraeus Port Authority capital, currently being the main shareholder (67% of the capital) and making the Greek port the pivotal BRI investment in the Mediterranean basin. While it is possible to subdivide different BRI corridors for Europe-Asia connections, the discontinuous nature of the BRI make most of the projects capable of serving a plurality of solutions and "corridors". For this reason, for instance, Piraeus port is not only connected to the Maritime Silk Road but it will be also connected to the EuroAsia rail link, using rail service as a

complementary tool for the new shipping solutions through the expected rail infrastructure connecting Piraeus with the Central European countries (i.e. Budapest).

Despite this latter element, none of the foreseen integrated transport corridors has been actually entirely developed and this limits the possibility to evaluate the economic and social impact of the proposed solutions. For this reason, several authors (e.g. (e.g. Herrero and Xu, 2017; Huang, 2016) raised issues on the potential market and economic effects of such investments, given that limited assessments have been developed for most of the currently discussed projects. In particular, Herrero and Xu (2017) questioned the possibility for gains from the Euro-Asia corridors for most of the local communities and companies. Thus, the still blurry picture of actual projects included in the BRI and the (mainly) political – rather than purely operational – nature of most of the projects make paramount to better understand market effects of main logistics projects (i.e. market competition, service reshuffling), also in connection with existing solutions or on-going projects.

3. The BRI and the Med

As mentioned above, the BRI strategy have been developed mainly through discontinuous and independent investments that often are linked together in subsequent phases. This is the example followed, for instance, in the Central Asia Corridors, in which investments on the port sector have been followed by related investments in the rail and road sector as well but only in later stages. Following this pattern, it is possible to underline how BRI strategy is currently following a similar approach in the European macro-region as well. Example of this is the three differentiated strategies currently in place to promote the BRI, with rail services started to be operated even before the promotion of the first OBOR initiative (i.e. 2011), the Piraeus and other planned port investments (e.g. Venice offshore terminal and Savona-Vado terminal) from 2016, and the infrastructure investments agreed with main Central and Eastern Economies (CEE) from the 2015 (among which the rail infrastructure between Piraeus and Budapest represents the main completed investment). While all these strategies might have seen separately, all together they will heavily affect the future European logistics market, with the Mediterranean area that might be the most affected one.

3.1. The Euro-Asia rail network

Concerning the rail services, the current promoted services connect all main Chinese industrial cities with strategic location in Eastern and Central Europe, being defined in the BRI official documents as the Euro-Asia landbridge solution. From a logistic point of view, most of the services are currently running on an updated infrastructure that overpass several EuroAsia countries (e.g. Kazakhstan, Iran) that has been studied to bypass the old Russian railway route. Chinese institutions have invested heavily in this alternative, given the multiple destinations that this line can serve (e.g. the Pakistan Economic Corridor partially lies on the same infrastructure). Among the main rail destinations, there are all the main Central (e.g. Germany) and Eastern (e.g. Poland, Baltic countries, Hungary, Czech Republic) countries, allowing cargos the reach all main destination, bypassing the maritime solution. While the service started as exceptional solution, it is currently registering growing volumes that are also not related to the high value goods that were characterising first services. As described by Li et al. (2018) current rail services are competitive in respect to the maritime solution for a variety of potential cargo that needs reliable and rapid transportation solutions. Moreover, while in the past train connections between China and Europe where mainly organised thanks to (public) BRI related subsidies, starting from 2015 a balanced trade has been developed, making such services more profitable and then more sustainable in the long run. This profitability though is highly related to the capability for the transport solutions to attract a growing volume of cargo. On this respect Yang et al

(2018b) seem to question the possibility for this form of landbridge to be successful given that market operators still prefer the traditional maritime routes. In order to cope with this risk, BRI is planning to intervene in several ways, mainly either through international trade agreements (as the one promoted with the CEE organisation) or incorporating currently EuroAsia rail services within other intermodal solutions, as suggested by Yang et al. (2018a) for the optimised COSCO network.

3.2. COSCO strategy and the port of Piraeus

The COSCO full acquisition of Piraeus Port – through a capital investment in the related Port Authority – occurred in 2016, after a decade of exclusive operation in one of the port terminals. The abovementioned operation is today considered as one of the most significant BRI investments worldwide and the biggest in Europe (e.g. Le Corre, 2018; Mathews, 2017). The overall investment value has been around 8bln USD, with already committed investment of about 500 mln USD. At the end of the expansion plan, port of Piraeus will become one of the biggest Mediterranean hubs for container, with an expected capacity of 3.7 million TEU (against a volume of 450,000 TEU in 2017). Most of the containers will not only destined to the local Greek market but will be also transhipped in neighbouring countries, making Piraeus the main hub of the East Med. For promoting the role of Piraeus, after the 2016 acquisition, COSCO reshuffled its services, using the Greek port as a pivotal node for all its vessels passing for the Mediterranean area. Moreover, given the agreement signed in 2016 by COSCO to form the "Ocean Alliance" in order to manage main Asia-Europe services together with Cma-Cgm, Evergreen, and OOCL (now part of the COSCO group), all ports managed by the companies involved in the agreement received particular attention in the routing planning. For this reason, when the common routing plans for 2017 became public, Piraeus was used as Mediterranean hub for 4 out of 11 services connecting Asia and Europe (Cma-cgm, 2018). Moreover, when in spring 2018 "The Alliance" and "Ocean Alliance" decided to cooperate for some of the offered services, Piraeus was included as pivotal port for both services in Europe-Asia and Med-Americas, despite the original absence from the routing between the latter regions. This last element demonstrates the growing importance of the Greek port within the COSCO promoted network.

The strategic location of the port of Piraeus makes the port not only a competitive logistics node for container shipping but for other markets as well. Given the diversified business of COSCO (e.g. bulk, ro-ro), the Chinese company is planning to transform the Greek port in its main hub for all the main trade from Asia to Europe, counting on the possibility to develop efficient services in all the maritime sectors.

The COSCO Shipping Port (CSP) company is the COSCO division for managing port operations, Currently CSP owns – at least partially – several terminals, mainly located in Far East Asia. Starting in mid '00s, COSCO started to develop its worldwide network, not only investing in the Piraeus port but trying to enjoying multiple network economies. From a European perspective, CSP operations have, for instance, recently focused on the Zeebrugge port (Belgium) as well as with minority shares in both Rotterdam (The Netherlands) and Antwerp (Belgium). Within the Mediterranean area, while Piraeus is planned to be the main hub, other investments are currently planned. Currently minority shares are also hold in the Turkish port of Kumport and in the Suez Canal Terminal. In autumn 2016, CSP bought 40% ownership of a new container terminal in Savona (Italy) with an expected capacity of 900,000 TEU, while it is one of the main operators interested in developing a new offshore container platform in the north Adriatic Sea. The terminal of Savona is of particular interest since the main shareholders is APM Maersk, theoretically a competitor in both the terminal and the shipping sector (since it belongs in a third alliance as well).

The current investments will allow COSCO to easily operate over main trade routes, concentrating intercontinental traffic in its hub port – also in connection with the role of the operators within the Ocean Alliance – and then redirecting them to the final destinations, thanks to a future network of feeder ports in both West and East Med. The so-built network will probably assure a competitive advantage to the Chinese company in respect with not allied competitors but it might also affect the port market as well, given the potential impact on transhipment flows (e.g. Marsaloxx, Gioia Tauro, Port Said) in both sides of the Med basin.

3.3. International agreements and future transport network

In terms of transport corridors, European countries have experienced a unique supra-national investment strategy within the Trans-European Transport Network (TEN-T) policy. Nevertheless, while most of these investments are thought to assure regional cohesion and accessibility, the BRI strategy is partially developing complimentary projects aiming at interconnect EuroAsia rail services with the Maritime Silk Road strategy. The biggest example is the China-CEE rail project of a high speed-high capacity rail connection between Athens and Budapest (passing through Serbia) that is planned to connect the Port of Piraeus to all major European market through fast and reliable rail services. The original project (agreed in 2015) was quite ambitious with the completion of the first part of the 1,000 km corridor within few years (i.e. Belgrade-Budapest), nevertheless construction works only started around the end of 2017 with an expected delivery date set for 2020. While current released technical details reduced the ambitious of the project (e.g. maximum speed down from the expected 250 km/h to 160 km/h) the corridor will allow operators to have dedicated connection between several landlocked countries and one of the main Med ports. The agreement of the rail construction, while boosted relations between China and CEE, generated several negative reactions in different European countries, given the potential negative effects of such foreign management on internal EU trade. Moreover, the agreed project is partially in contrast with the Pan-European Corridor (project 2) of the TEN-T, generating overlaps and potential issues with the EU transport planning. While currently no specific restrictions have been agreed, EU policy makers have already discussed potential future limits to foreign investment in EU countries' strategic infrastructures (e.g. "Investment screening regulation"). If approved, such regulation will heavily affecting future BRI projects within the EU, reducing the effects of future project within the European market.

3.4. The effects of BRI on Med ports

Despite the small amount of literature addressing the effects of the BRI in the European transport sector, it is obvious that the several on-going projects will heavily affect the logistics solutions as well as the competition within the maritime sector. As discussed above, the only main maritime node currently included in the BRI strategy has already secured a pivotal role within the European-Asia trade lines and an important role in other intercontinental routes. The presence of COSCO in other European ports as well as the potential increase in connectivity of port through other rail and maritime solutions will probably grant a decisive competitive advantage, with a cascading effect on other competing ports. In order to answer to such market concentration, some of the competing companies are also trying to increase their presence in different logistics activities (e.g. Maersk) but the possibility for COSCO to be included in the BRI strategy assure a leading role in the land transport planning as well. This latter element seems to currently generate the main competitive disparity.

While from a market point of view, there is no possibility to intervene, EU authorities – as well as several national associations (e.g. TradeWinds, 2018) – are currently promoting a series of political interventions, in order to limit the potential market distortions. On this regards, Yang et al (2018a)

offer an interesting simulation outcome: whenever rail and maritime services from China to Europe are run in coordination, an optimal routing system can be offered, enlarging both the maritime operator network and maximising the load factor of the vessels, thus positively impacting on the two main competition elements. The abovementioned research results underline how the BRI overall could affect the competition within the Med basin at current stage, without introducing the use of further feeder ports, currently under discussion or development (i.e. Savona and Venice).

4. Conclusive remarks

The current paper discussed the Belt and Road Initiative, highlighting current trends in the discussion of the project. While most of the currently published papers are mainly focusing on the political debate around the BRI strategy, only a minority of studies discuss the transport implications of planned investments. In fact, while the estimated amount of investment has the capability of reshaping most of the current transport infrastructure in both Asia and Europe, the slow progress in actually developing infrastructure reduced the interest of academia in looking at specific transport aspects. Overall, all the papers related with transport focus on either specific case studies or in the optimisation of future corridors, while no papers focus on the potential effects of BRI on the port competition level of the Mediterranean area. This lack of interest is quite unexpected given the several projects currently under discussion as well as the main development of several Mediterranean ports, directly or indirectly connected to the BRI strategy (e.g. COSCO investments in Piraeus). Moreover, most European countries are facing modifications at both sea and land side, thanks to the development of new rail services from China and to dedicated infrastructure investments that are generating competition with the Trans-European Transport Network projects. The abovementioned scenario increases the need for market studies, in order to highlight threats and opportunities for main market operators as well as for potential impacts on local communities.

Current study has the only aim of being a first exploratory discussion, future development will include surveys and interviews to main operators, with the aim of quantifying expecting impacts of current and foreseen BRI related investments that might change the Mediterranean port industry.

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