



Università
Ca' Foscari
Venezia

Corso di Laurea magistrale
(ordinamento ex D.M. 270/2004)
in Relazioni Internazionali Comparate

Tesi di Laurea

—
Ca' Foscari
Dorsoduro 3246
30123 Venezia

The Position of the Italian Port System in the Changing European and International Context: Threats and Opportunities

Relatore

Ch.mo Prof. Stefano Soriani

Correlatore

Ch.mo Prof. Mario Volpe

Laureando

Carlotta Puglierin

Matricola 818912

Anno Accademico

2013 / 2014

Table of Contents

ABSTRACT	p. 4
INTRODUCTION	p. 13
CHAPTER I – Ports and new international transportation trends	p. 16
1.1 PORTS: DEFINITION AND FUNCTIONS	p. 16
1.1.1 The changing role of ports	p. 16
1.1.2 Competitiveness between ports in the globalization era	p. 21
1.2 CONTAINERISATION AND INTERMODALITY	p. 28
1.2.1 Intermodal freight transportation and containers	p. 28
1.2.2 Linking the port to the transportation network	p. 34
CHAPTER II – European reactions to containerization and intermodality	p. 40
2.1 WINNERS AND LOSERS IN THE EUROPEAN GAME	p. 40
2.1.1 Initiatives for port re-qualification	p. 40
2.1.2 The winners: Northern Range ports	p. 44
2.1.3 The losers: Mediterranean ports	p. 52
2.2 EUROPEAN PORTS POLICY	p. 61
2.2.1 The call for a European common regulation	p. 61
2.2.2 The challenge of sustainability in ports development	p. 66
2.2.3 Funds for port modernization	p. 73
CHAPTER III – New opportunities for the Mediterranean	p. 78
3.1 THE RENEWED INTERNATIONAL INTEREST IN THE MEDITERRANEAN	p. 78
3.1.1 The key role of the Mediterranean sea in UE-East trade relations	p. 78
3.1.2 The TEN-T program in the Mediterranean: a European strategy	p. 86
3.1.3 The growing importance of Southern Mediterranean ports	p. 94

3.2 RECENT PROJECTS FOR MEDITERRANEAN INTEGRATION	p. 104
3.2.1 The <i>Motorways of the Sea</i> project of 2003	p. 104
3.2.2 Marco Polo and Galileo	p. 110
3.2.3 e-Freight and e-Maritime projects	p. 115
CHAPTER IV – A focus on Italian situation: time to decide	p. 119
4.1 NATIONAL POLICY ON PORTS	p. 119
4.1.1 Law 84/1994 and its impact on ports	p. 119
4.1.2 The Italian approach to intermodality: freight villages	p. 127
4.2 STRENGTHS AND WEAKNESSES OF THE ITALIAN PORT SYSTEM	p. 132
4.2.1 Italy’s geographical position is not enough	p. 132
4.2.2 A serious infrastructural delay	p. 135
4.2.3 Italian red tape	p. 139
4.3 THE CALL FOR ACTION: SOME OPPORTUNITIES NOT TO BE MISSED	p. 142
4.3.1 The Rhine-Alpine corridor	p. 142
4.3.2 The Baltic-Adriatic corridor	p. 146
4.3.3 NAPA: an association promoting the Northern Adriatic	p. 150
CONCLUSION	p. 155
BIBLIOGRAPHY	p. 159
SITOGRAPHY	p. 166
ACKNOWLEDGEMENTS	p. 168

ABSTRACT

«Ignoranti quem portum petat nullus suus ventus est»¹

«Non c'è vento a favore per chi non conosce il porto»

(Seneca)

L'obiettivo del presente elaborato è quello di mettere in evidenza l'importanza dei sistemi portuali quali protagonisti di rilievo nella scena economica internazionale. La scelta dell'argomento è nata dalla volontà di aprire una finestra su un tema tanto attuale quanto complesso come è quello del commercio internazionale. In questo quadro, la specifica scelta del settore marittimo come area di interesse per lo sviluppo della tesi è giustificata dal fatto che, attualmente, una grande percentuale dei traffici commerciali passa per i porti, i quali si configurano sempre di più come attori fondamentali per lo sviluppo e la prosperità delle economie mondiali.

I porti, per natura, costituiscono il punto di collegamento tra il mare e la terra, in questa tesi tra il trasporto marittimo e il trasporto su gomma, su rotaia o per mezzo delle vie navigabili interne. Il focus è stato posto sul trasporto intermodale delle merci, e in particolare sul traffico di containers, forse la più rivoluzionaria modalità di trasporto mai introdotta nel settore. L'innovazione introdotta da tale sistema risiede nel fatto che i contenitori siano facilmente separabili dal trattore stradale per poter essere imbarcati sulle grandi navi portacontainer, e successivamente, dal porto di arrivo possano essere collocati di nuovo su camion per poi essere adattati anche al trasporto ferroviario. Ciò implica che le navi, i vagoni ferroviari o i camion portacontainer non debbano essere scaricati e caricati ogniqualvolta ci sia un trasferimento di merce da una modalità di trasporto ad un'altra. In tal modo, i carichi di merce non necessitano di essere mai maneggiati dal momento in cui partono fino alla destinazione finale, se non per controlli doganali o di sicurezza. La movimentazione dei container, seppur renda considerevolmente più veloce la distribuzione delle merci, necessita di spazi molto ampi, non solo per le manovre, ma anche per lo stoccaggio dei container vuoti o di quelli in attesa di essere re-indirizzati

¹ Lucio Anneo Seneca, *Lettere a Lucilio*, lettera 71, 62-65 d.C.

verso la destinazione finale. Ciò pone non pochi problemi ai sistemi portuali, i quali si trovano a dover adattare le proprie strutture a tale innovazione, e spesso l'espansione degli spazi portuali è resa difficoltosa dalla conformazione del territorio – l'esistenza di barriere naturali costituisce un ostacolo difficilmente sormontabile – e dalla presenza delle città, sorte nelle immediate vicinanze del porto, in particolare per i porti di più antica costruzione, come sono, ad esempio, quelli italiani. Ecco, quindi, come un cambiamento epocale nella direzione di una maggiore innovazione nel settore dei trasporti possa penalizzare quei porti poco flessibili strutturalmente o poco inclini all'ammodernamento infrastrutturale a causa della mancanza di coordinamento, di normative chiare e condivise e, soprattutto, di risorse economiche sufficienti per affrontare cambiamenti strutturali di rilievo. Una delle tendenze maggiormente significative del secolo scorso, poiché ha completamente rivoluzionato i mercati internazionali e il settore del trasporto merci, è senza dubbio la globalizzazione, che ha comportato una sostanziale apertura dei mercati e l'abbattimento delle barriere doganali, soprattutto tra stati appartenenti a blocchi economici e politici regionali, com'è il caso, ad esempio, dell'Unione Europea. Ed è così che le filiere di produzione si spezzano, ogni prodotto viene diviso in componenti, le quali vengono prodotte in una quantità di paesi diversi dai quali sono poi spedite per l'assemblaggio finale. E proprio questo è, appunto, il fattore che ha influenzato in maniera così significativa il settore del trasporto internazionale: la necessità di collegamenti più frequenti e più efficienti, volti a ridurre quanto più possibile i tempi e i costi del trasporto merci, dal momento che vanno tutti ad influire pesantemente sul costo del prodotto finale. La tesi prende in considerazione la stretta correlazione esistente tra le strutture portuali e i cambiamenti di tendenza che costantemente vengono registrati nel campo del commercio internazionale. Nella teoria, infatti, ad ogni significativo mutamento dell'assetto commerciale a livello mondiale, ma anche a livello europeo e, ancora più localmente, a livello italiano, dovrebbe corrispondere un cambiamento nel porto, sia esso nella struttura, nell'introduzione di nuove tecnologie, nella costruzione di infrastrutture adeguate o nel dragaggio dei fondali. Tuttavia, le tendenze commerciali evolvono a ritmo più sostenuto di quanto possano fare i porti per adattarsi al cambiamento, ed è appunto per questo motivo che, allo stato attuale, la competitività degli scali portuali è in

larga parte determinata dalla capacità e velocità degli stessi nell'adattarsi alle nuove tendenze commerciali e dalla loro flessibilità strutturale. I mutamenti che avvengono sulla scena economica internazionale determinano vincitori e vinti tra i sistemi portuali, sulla base di scelte che si rivelano più, o meno, in linea con le innovazioni introdotte nel settore, o con lo spostamento del baricentro dei traffici internazionali, che si sta muovendo sempre più verso est, come conseguenza dell'enorme crescita economica sperimentata dalle economie del *Far East*, e verso il Mediterraneo, specialmente dopo la riapertura del canale di Suez, avvenuta nel 1975. Dalla partita europea, escono vincitori i porti del nord Europa, grazie alla loro maggiore efficienza, preparazione logistica e capacità organizzativa e di gestione dei carichi, alla più elevata disponibilità di fondi per intervenire sulle infrastrutture esistenti e crearne di nuove laddove siano necessarie, e alle maggiori garanzie che offrono in termini di rispetto dei tempi di carico/scarico e di consegna delle merci, così come dei costi delle operazioni portuali. Al contrario, i porti affacciati sulla sponda nord del bacino mediterraneo spesso non sono in grado di fornire i medesimi servizi in tempi e modi adeguati alla velocità richiesta, al giorno d'oggi, dagli operatori portuali dal trasporto intermodale internazionale e dalle grandi compagnie di navigazione.

L'interesse per questo tema deriva dalla volontà di comprendere alcune delle dinamiche che sono a capo del commercio internazionale e che fanno sì che l'Italia, pur godendo della miglior posizione geografica all'interno del Mediterraneo, la quale le permetterebbe di intercettare facilmente i traffici provenienti da est tramite il Canale di Suez, e pur vantando una lunga tradizione ed esperienza nel settore del commercio marittimo, venga bypassata dalle grandi compagnie di navigazione. Esse, infatti, tendono sempre più a scegliere di affrontare un tragitto più lungo, ma che offra maggiori sicurezze in termini di tempi di consegna della merce, di gestione dei carichi e di efficienza logistica. Da una considerazione puramente geografica, risulta piuttosto evidente il fatto che la nostra penisola abbia l'aspetto di un molo che si protrae nel Mediterraneo, e, considerata anche l'elevata quantità di porti presenti lungo le sue coste, ciò permetterebbe l'attracco di numerose navi, le quali porterebbero un ritorno economico non indifferente all'economia del paese. Tuttavia, si sta rischiando di perdere questo enorme vantaggio a causa delle palesi

inefficienze logistiche, burocratiche e amministrative del sistema portuale italiano. Mentre i *competitors*, per così dire tradizionali, dei porti situati nella sponda nord del bacino mediterraneo sono sempre stati i porti del cosiddetto *Northern Range*, ovvero quelli affacciati sul Mar Baltico e sul Mare del Nord, ora a minacciare il ruolo dell'Italia come piattaforma logistica di rilievo al centro del Mediterraneo, si stanno facendo avanti una serie di sistemi portuali di nuova costruzione nei paesi emergenti della sponda sud. Tali sistemi presentano diverse condizioni vantaggiose alle compagnie di *shipping* internazionali, quali la posizione strategica in relazione alla rotta Suez – Gibilterra, gli ingenti investimenti nel settore delle infrastrutture, che risultano in una migliore qualità dei servizi, e il minor costo del lavoro. Nonostante non si possa affermare che siano paesi politicamente stabili, soprattutto dopo le vicende delle “primavere arabe” che li hanno investiti a partire dal 2011, i paesi rivieraschi della sponda sud riescono ad intercettare i traffici provenienti da Suez in misura maggiore di quanto non faccia la nostra penisola. Quindi, c'è da chiedersi per quale motivo ciò accada, e la risposta è senza dubbio da trovare nella lunga lista di inefficienze e di occasioni perse che caratterizza il sistema portuale italiano e che ha fatto sì che i nostri porti ci rimettessero in termini di competitività, credibilità internazionale e capacità di attrarre investimenti esteri, i quali contribuirebbero considerevolmente a migliorare la situazione, ormai critica, dell'economia italiana. Risulta chiaro, quindi, come il ruolo dei porti come motori della crescita dei paesi rivieraschi sia a dir poco fondamentale, e come essi debbano muoversi nella direzione di un generale adattamento alle nuove sfide poste dall'intermodalità, dalla movimentazione dei containers e dalla dimensione sempre maggiore delle navi che li trasportano da un punto all'altro del pianeta.

Grazie allo sviluppo senza precedenti e alla conseguente apertura dei mercati che hanno caratterizzato le economie del *Far East* negli ultimi decenni, il mar Mediterraneo si è trovato nuovamente al centro delle più importanti rotte commerciali, accogliendo le merci che giungevano nel bacino tramite il Canale di Suez. La combinazione di due fattori decisivi che hanno preso forma negli ultimi vent'anni del secolo scorso, quali, appunto, questo enorme sviluppo dei mercati dell'est del mondo e il diffondersi della globalizzazione, ha portato allo sviluppo di un

sistema innovativo di distribuzione delle merci chiamato *hub and spoke*. Tale sistema si basa sul fatto che solo un numero limitato di porti vengano utilizzati come scali dalle grandi navi portacontainer, dai quali poi si sviluppa una fitta rete di collegamenti che vengono operati con i porti minori tramite navi di dimensioni ridotte rispetto a quelle transoceaniche. Secondo questa logica, i cosiddetti porti di *transshipment*, ovvero quelli che accolgono le grandi navi devono presentare una serie di caratteristiche che rendano possibile tale servizio, tra le quali una posizione geografica strategica in relazione alle maggiori rotte commerciali, un'adeguata dotazione infrastrutturale, un elevato livello di efficienza e di *know-how* nel portare a termine le operazioni portuali, fondali profondi fino a 16 metri che permettano l'attracco delle più capienti navi di ultima generazione e un livello di accessibilità e di connettività con la rete di trasporto tali da consentire, rispettivamente, un facile attracco al porto e un veloce re-indirizzamento dei carichi verso i *feeder ports*, ovvero gli scali minori. Tale meccanismo permette alle grandi compagnie di navigazione non solo di poter impiegare navi sempre più capienti per la movimentazione delle merci, ma anche di risparmiare tempo e denaro trasportando quantità sempre maggiori di merci nella stessa unità di trasporto.

Le già citate sfide poste dall'evoluzione del commercio internazionale sono state accolte in ambito europeo, risultando nella formulazione di normative e progetti condivisi a livello comunitario per lo sviluppo di una migliore connettività tra i paesi membri e all'interno dei confini dell'Unione. Tali progetti incoraggiano, in particolar modo, una sostanziale ottimizzazione dei tempi e delle modalità di trasferimento dei carichi da un sistema all'altro, quindi, dalla nave alla rotaia e successivamente al trasporto su gomma per la realizzazione del cosiddetto "ultimo miglio", ovvero la fase finale della catena di distribuzione. Tale organizzazione della filiera di trasporto dall'origine alla destinazione ultima, se fosse efficiente e venisse migliorata la componente della logistica applicata alla movimentazione di merci e persone, risulterebbe, inoltre, altamente sostenibile dal punto di vista ambientale, dal momento che la modalità meno ecologica e meno sicura, ovvero il trasporto su gomma, verrebbe impiegata solamente nell'ultimo tratto della catena distributiva. I progetti comunitari che la tesi si propone di analizzare sono stati scelti in base alla

rilevanza strategica degli stessi per l'Europa come insieme coerente e unanime di attori che condividono i medesimi obiettivi e hanno concordato mezzi collettivi per la loro attuazione. Inoltre, aspetto assolutamente non secondario ai fini della tesi qui sostenuta, tra i progetti che sono stati presi in considerazione ci si è focalizzati maggiormente su quelli all'interno dei quali i porti assumono un'importanza strategica di assoluto rilievo. Ci si è soffermati, quindi, sul progetto Autostrade del Mare, all'interno del quale i porti sono gli assoluti protagonisti nella distribuzione dei carichi, sui programmi Marco Polo I e Marco Polo II, che intendono ridurre al minimo l'impiego della modalità stradale per la distribuzione delle merci, incoraggiando il sostanziale trasferimento dei traffici dal trasporto su gomma al trasporto marittimo, al fine di rendere più ecologicamente sostenibile l'intera catena logistica ed essere in grado di gestire l'aumento dei volumi di traffico previsto per i prossimi anni. Anche gli altri progetti comunitari citati vanno nella direzione di una maggiore sostenibilità ambientale e di un più elevato livello di velocità ed efficienza nell'organizzazione dei trasferimenti tra le differenti modalità di trasporto e tra gli stati membri dell'Unione Europea.

La decisione di prendere in esame la posizione dell'Italia in relazione ai progetti comunitari e rispetto alle economie emergenti del *Far East* e della sponda sud del bacino del Mediterraneo, nasce dall'intenzione di capire a che punto siamo e cosa resta ancora da fare affinché la nostra penisola possa davvero essere competitiva sulla scena commerciale internazionale. L'Italia, le cui coste si snodano lungo circa 8000 km, presenta un potenziale altissimo in questo senso, dati la conformazione fisica del paese – il fatto di essere una penisola, dunque circondata su tre lati dal mare – e l'elevato numero di porti presenti sul territorio. Per tale motivo, molti dei progetti europei coinvolgono direttamente il sistema portuale italiano, che si trova ad essere interessato da alcuni dei più rilevanti corridoi trans-europei, quali il Baltico - Adriatico, il corridoio Mediterraneo, lo Scandinavo - Mediterraneo e il Reno - Alpi. I porti vengono, quindi, a configurarsi come nodi essenziali di una capillare rete trans-europea il cui completamento è previsto per il 2030 e che, nelle previsioni, dovrebbe rappresentare un considerevole valore aggiunto per l'Europa nel suo complesso. La cosiddetta *core network* si limiterà a collegare solo i nodi industriali maggiori, siano

essi terminal portuali, snodi ferroviari o grandi città, mentre è prevista la realizzazione di una *comprehensive network* che, diramandosi dalla rete principale, creerà dei collegamenti altrettanto veloci ed efficienti, ma a livello locale. I corridoi trans-europei non sono altro che il prolungamento via terra delle Autostrade del Mare, progetto molto caro all'Unione Europea poiché incoraggia l'impiego del trasporto marittimo invece di quello su strada, e che contribuirebbe in modo sostanziale alla prosperità della nostra economia nazionale. La realizzazione di tali programmi, i quali esortano la creazione di condizioni favorevoli a livello comunitario per l'ulteriore sviluppo del trasporto intermodale in Europa, apporterebbero un duplice vantaggio: da un lato, infatti, prenderebbe finalmente forma l'iniziativa volta alla riduzione delle emissioni nocive prodotte dal settore dei trasporti, uno dei maggiori responsabili dell'impatto negativo sull'ambiente. Dall'altro lato, invece, il trasferimento di buona parte dei traffici commerciali alla modalità di trasporto marittimo porterebbe al decongestionamento delle maggiori strade e autostrade italiane con l'eliminazione dei cosiddetti colli di bottiglia, i quali contribuiscono a rallentare il servizio di distribuzione delle merci, purtroppo riducendo la competitività dell'Italia sulla scena internazionale. Inoltre, ciò permetterebbe al nostro paese di aumentare la propria capacità di gestione dei flussi commerciali, ventilando l'ipotesi di una maggiore attrattività in vista dell'ulteriore aumento dei volumi di traffico previsto per i prossimi anni.

Ciò detto, nonostante il suo enorme potenziale per l'aumento della ricchezza nazionale, ma anche europea, in Italia persistono grossi problemi legati alla dotazione infrastrutturale, ancora largamente inadeguata per potersi confrontare con le potenze industriali europee e, ovviamente, con le enormi quantità di merce provenienti dai mercati dell'est. L'inadeguatezza delle infrastrutture italiane nel settore del trasporto è ben nota: scarsa accessibilità ai porti, profondità dei fondali non ancora adatta a permettere l'attracco delle grandi navi portacontainer, spazi troppo limitati per le operazioni portuali, scarsa efficienza dei servizi legati alle infrastrutture, presenza insufficiente di connessioni intermodali che, anche laddove ci siano, risultano poco efficienti e denotano poca integrazione tra i sistemi nazionali e le diverse modalità di trasporto impiegate. Le sfide attuali poste in essere dal

commercio internazionale, però, non riguardano solo il porto, ma anche il territorio circostante, che si trova ad ospitare strutture che forniscono all'utente una serie di servizi a valore aggiunto che vanno al di là delle semplici operazioni portuali. Gli interporti, appunto, sono i complessi strutturali nei quali vengono forniti tali servizi, volti al facilitare lo scambio di merci tra le diverse modalità di trasporto e a migliorare le connessioni intermodali tra i nodi della rete. Ebbene, in Italia attualmente risultano operativi solo 18 dei 29 interporti la cui realizzazione era stata prevista, senza contare il fatto che tra il nord e il sud del paese ci sia non solo una scarsa coordinazione tra le parti, ma anche un notevole squilibrio tra la presenza di porti, più massiccia nel Mezzogiorno, e le infrastrutture per il trasporto intermodale, quali strade, autostrade e snodi ferroviari, più numerosi e più efficienti al nord. Dovuto alla prevalenza della dimensione locale su quella nazionale e internazionale e a una sostanziale mancanza di lungimiranza da parte delle autorità italiane sulla questione del trasporto intermodale, tale squilibrio causa rallentamenti nella catena di distribuzione delle merci e, di conseguenza, la perdita di importanti quote di mercato per l'economia della penisola. Il fatto che in Italia la modalità di trasporto su gomma sia ancora quella prevalente, avendo come risultato un preoccupante livello di congestione delle infrastrutture stradali e la formazione dei cosiddetti "colli di bottiglia", denota una certa riluttanza verso un tentativo di miglioramento strutturale della rete di trasporto nazionale, dovuto, probabilmente al troppo affidamento che è sempre stato fatto sull'enorme potenziale derivante dalla favorevole posizione geografica al centro del mar Mediterraneo. Al contrario, i sistemi portuali dei paesi emergenti situati nella sponda sud del bacino, pur trovandosi anch'essi in posizione strategica rispetto alla rotta Suez – Gibilterra, stanno investendo ingenti somme di denaro nella realizzazione di nuove infrastrutture e nell'adattamento di quelle già esistenti agli attuali parametri del commercio internazionale. Ciò fa sì che l'Italia, in mancanza di un decisivo intervento nel settore, rischi di venire definitivamente marginalizzata rispetto alle principali rotte commerciali globali. Se a ciò si aggiunge che la legge quadro sulla quale ancora si basa la politica nazionale dei porti – la legge 84/94 – non risulta più attuale, in quanto prevede un numero logisticamente troppo elevato di Autorità Portuali per poter permettere una efficiente gestione del settore e limita il potere decisionale di

tali enti solamente al porto, non stupisce che l'Italia si trovi in una situazione di ritardo rispetto alla media europea. Inoltre, il peso eccessivo della burocrazia nella gestione delle catene di trasporto e delle operazioni portuali compromette la capacità del sistema portuale italiano di attrarre IDE (Investimenti Diretti Esteri), confinandolo nella difficoltà di intervenire, data la scarsa disponibilità di fondi statali da assegnare a costose riforme infrastrutturali. La tesi prende in esame due dei nove corridoi che costituiscono la *core network* e che coinvolgono direttamente le strutture nazionali dell'alto Adriatico e dell'alto Tirreno, rispettivamente il corridoio Baltico – Adriatico e il corridoio Reno – Alpi, mostrando come l'ipotesi che l'Italia non colga tali preziose opportunità per migliorare l'integrazione dei propri sistemi portuali in ambito europeo e, quindi, per accrescere le proprie possibilità di successo, anche internazionale, non debba assolutamente verificarsi. La creazione di nuove infrastrutture e il miglioramento dei servizi ad esse relativi, dovrebbero essere due binari sui quali le autorità italiane si propongano di intervenire in parallelo, poiché l'uno senza l'altro non può essere sufficiente per mettere finalmente fine alla situazione di *impasse* che caratterizza la nostra economia nazionale. Il rischio di creare solamente le infrastrutture necessarie alla realizzazione dei corridoi trans-europei, senza intervenire allo stesso modo sulla qualità dei servizi offerti, è, infatti, altissimo e porterebbe i nostri porti ad essere sopraffatti dai più efficienti sistemi stranieri, ai quali si darebbe, così, la possibilità di penetrare maggiormente nel tessuto commerciale italiano. Uno dei problemi alla base del nostro sistema portuale, e della mancanza di iniziativa del paese, risiede nel fatto che la maggior parte degli ambiziosi progetti proposti, e anche programmati, nel tentativo di uscire dalla situazione attuale di crisi economica, puntualmente restino largamente irrealizzati.

Alla luce dell'insufficienza della dotazione infrastrutturale, dell'inadeguatezza di una politica portuale nazionale e dell'eccessivo peso della componente burocratica sul settore del trasporto merci, ci si chiede, in questa sede, per quale motivo le grandi compagnie di navigazione e gli investitori stranieri debbano continuare a siglare accordi nell'ambito del sistema portuale italiano, e quale sarà il futuro del nostro paese nel caso in cui non riuscisse a cogliere le nuove sfide poste dall'intermodalità e dalle nuove tendenze strutturali in questo campo.

INTRODUCTION

The aim of this work is to contextualize the position of the Italian port system with respect to the recent trends in international transportation, such as globalization, the further openness of markets and the consequent access of new emerging economies into the logics of international trade, the race towards ever bigger container ships, the introduction of intermodality in the transportation sector and the unprecedented economic growth of the countries of the Far East, which has justified the renewed interest of global transport operators in the Mediterranean port systems. In order to approach this issue, the dissertation has been organized into four chapters, each of them deals with a different aspect of the topic.

Chapter one provides a digression concerning the absolute relevance of ports as main actors in the field of intermodal transportation of goods and people, in Europe as well as worldwide. As will be explained, the parameters which determine their function on the international scene often depend on their nature, their geographical location and their physical structure and characteristics. However, their both structural and administrative flexibility and their ability to adapt to the changing trends in freight transportation constitute the main guidelines determining their competitiveness index in the globalization era. Thus, in this first section, it will be illustrated how the evident winds of change which have been involving the transportation sector in the last decades, have considerably modified the common perception of ports and have somewhat determined their success or failure on the international stage.

Chapter two will focus on Europe, and the attention will be drawn on the reactions of European countries to the advent of containerization and intermodality in the second half of the past century. But why those reactions are so important in contextualizing the position of the Italian port system with respect to the other Member States? The answer is to be found in the fact that the parameters determining the competitiveness of a port, which will lead it to be either chosen as a port of call or bypassed by big shipping companies are today heavily affected by the

responses to such new global trends. In the European framework, in fact, those reactions have brought to the current existence of an infrastructural and efficiency gap between Northern Range ports and Mediterranean ports, which can be considered, respectively, the winners and the losers in the European game. Then, this section will deal with some of the most challenging issues that have to be faced by ports in the contemporary era, including among them the absence of a European common regulation on the maritime sector, the increasingly more required adaptability to the changing situation, the ever stricter environmental standards, and the problem of financing port reforms and modernization of infrastructures.

In chapter three, the focus will be on the regained international relevance of the Mediterranean basin in East-West trade relations, following the unprecedented growth of Eastern economies, occurred between the end of the 1980s and the beginning of the 1990s, and the huge amount of freight that, from that moment on, they have been exporting worldwide. Therefore, Mediterranean ports have been reevaluated for their important strategic position on the Suez-Gibraltar route and the economic advantages that big shipping companies would have managed to derive from calling in those ports instead of routing via the Northern Range system. Then, it will be illustrated how the competitiveness of European ports facing the Mediterranean basin has been put at risk by the tough competition between them and the ports located in the Southern shore. Moreover, an overview of the reasons for which these latter emerging ports result more attractive in the view of both big shipping companies and international investors will be provided. Besides, this same section will deal with some examples of European projects involving ports and encouraging a considerable shift of freight traffic volumes from the road modality to the maritime one.

To conclude, chapter four will provide an attempt to gather together all the issues taken in consideration in the previous chapters, taking an overall look to the Italian situation with respect to the changing European and international contexts. The aim of making some considerations about Italy is to understand what has already been done and what still remains to do so that the maybe best strategically-positioned country in the Mediterranean is not marginalised from the main commercial routes.

Undoubtedly, Italy needs to adopt a different approach, realizing that, with all the above mentioned factors at stake, the possibility of success given only by its favourable geographical position is rather remote. The challenges that Italian authorities should take into consideration are the total reform of the outdated law 84/94 on ports, the reduction of the bureaucratic burden into port and transportation operations and, even more importantly, the absolute necessity not to miss the growth opportunities deriving from European mobility projects to enhance connectivity within the continent and, also, the potential of regional agreements such as NAPA.

CHAPTER I

PORTS AND NEW INTERNATIONAL TRANSPORTATION TRENDS

1.1 PORTS: DEFINITION AND FUNCTIONS

1.1.1 The changing role of ports

In a world in which trade and interconnection between countries is dominating the scene, transportation plays an increasingly essential role from any point of view. During the last decades, Europe has been involved in *globalization*, a process which is closely related to international transportation, since trade in a global arena permits, among other things, to expand national markets, reduce production costs and increase interdependency between economies of different countries.²

Therefore, transportation nowadays has literally become the engine of our society; this means that if we really want to improve our mobility and way of living, the intervention in this field is not only desirable, but also of paramount importance.

In the extreme complexity of the transportation system worldwide, ports occupy a central position, since they, more than any other place, act as gateways and crossroads for goods and passengers. According to its definition, *a port is a location on a coast or shore containing one or more harbors where ships can dock and transfer people or cargo to or from land.*³ The keyword here is *transfer*, since it implies that a port is always an active player in the movement of anything, acting like a link between the sea and the land in the transportation process. Furthermore, ports are essential from a commercial standpoint, because, as far as maritime trade and tourism are concerned, they represent departure and arrival points respectively for goods and people.

In particular, if we focus on the Mediterranean Sea, the importance of ports acquires also a strategic value in terms of trade, as this region is situated in the middle of

² Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 144-145

³ OECD Glossary of Statistical Terms, see: <http://stats.oecd.org/glossary/> (last accessed in March 2014)

commercial routes between the East and the West of the world. Ports as we can see them today, appear different in size and functions, but all extremely complex in structure, and the reason is simple: they are the result of centuries of historical stratification. In the Mediterranean, ports can boast a long historic tradition; the majority of them, in fact, have remote origins. Nevertheless, it is good to notice that their nature and role have changed significantly over centuries, and in the last decades especially. Since the 1990s, indeed, the ports of the basin have gained a remarkable position within the global market. This fundamental change was especially due to the growing commercial power gained by the economies of the Far East and their increasing relevance in international trade.⁴ As pointed out by Pascetta in 2008, there are so many ports in the Mediterranean Sea because their development has often been linked to the physical conformation of the territories facing the basin.⁵ Transportation by land was made extremely difficult due to the presence of natural barriers such as mountain chains and to the lack of inland waterways. Considering the fact that trade has always been essential for economic survival, the development of maritime transport was very stimulated by such circumstances.

According to a study on the evolution of port function issued by the United Nations for the ESCAP region in 2003, it is possible to identify three stages of port development, differing from each other in strategies and policies implemented, approach and purpose of the activity of the port, and the expansion and integration level.⁶ In the first ports generation, that is until 1960, ports acted as cargo handling and cargo storage units and investments were focused only on port facilities. Between 1960 and 1980, the second-generation ports were built. At this stage, the carried-out activities slightly changed, ranging from packaging to distribution of cargoes in port hinterlands. Furthermore, customers' need and requests began to be taken into consideration. However, the real turning point occurred in the mid-1980s,

⁴ Buono F. and Soriani S., *Mare/Sea*, in Giaccaria P., Paradiso M., *Mediterranean Lexicon, Lessico Mediterraneo*. Società Geografica Italiana, Roma, 2012, p. 166

⁵ Pascetta C., *I trasporti marittimi: tra squilibri strutturali e funzionali*, in *Il Mediterraneo. Geografia della complessità*, a cura di Fuschi M., FrancoAngeli, Milano, 2008, p. 148

⁶ UNITED NATIONS, *Commercial Development of Regional Ports as Logistic Centres*, New York, 2003, p.19

when the container transportation system was introduced. For the first time, the intermodal transport system began to develop and the idea to shape an international network emerged.⁷ In the late 1980s, in fact, pressure over ports increased when the final users began to call for a major variety of services to be offered within these locations. Only then the conception of ports no more as simple gateways but as value-added services hubs arose, and this has been an extremely important change in the evolution of port functions. From that moment on, not only port functions and activities changed, but also their structure underwent a huge transformation. First and foremost, ports had to modify their inside organization to manage to offer a better service outside, and this has been especially the case of the transportation of goods from the hubs to the hinterland. «*The ports providing traditional services [...] are indistinguishable from their competitors*»⁸; traditional activities carried out by ports continue to play a central role, but the most urgent need has become to support them with additional services able to satisfy users' requests and let the port survive in the complex international mechanism of supply and demand. Apparently, ports are no more considered merely as isolated areas where ships handling takes place, but instead as key structures which are perfectly integrated within world commercial chains and global production networks.⁹ Furthermore, due to the fact that a multitude of activities and services linked to cargos handling and management are concentrated in these areas, ports have become over years great producers of job opportunities, even if this trend stopped sharply with the introduction of containers in the sixties of the twentieth century.

In the opinion of Sellari, there have been a couple of major expressions of the structural changes occurred in ports, and both of them are to be located in the twentieth century. He talks about coastal industrialization and the increasing size of ships due to the expansion of traffic routes. The former is a rapid process undergone by port areas following the important technological innovations in terms of speed,

⁷ Ibid., p. 20

⁸ Ibid. p. 22

⁹ Notteboom T., *Dock labour and port-related employment in the European seaport system: key factors to port competitiveness and reform*, report prepared for European Sea Port Organization (ESPO), Antwerp, University of Antwerp, ITMMA, May 2010, p. 2

capacity and functionality involving transportation industry which occurred in the second half of 1800.¹⁰ In the 1950s, ports became the symbol of industrial innovation and, consequently, the center of commercial growth. From this, a new spatial organization arose and took the shape of MIDAs (Maritime Industrial Development Areas), a series of new industrial spaces located on the coast which was the result of a real migration of industries towards the shores. This huge transformation, as can be seen, did not involve only the port but also the whole area surrounding it. The second noteworthy change in port structure pointed out by Sellari deals with traffic routes and the increasing size of ships.¹¹ This as well is closely related to the transformations occurred in ports structure, since the more ships increase their dimension, the more it becomes essential for port areas to expand in order to contain them and adapt to the ongoing situation.

Other transformations in ports management already achieved somewhere or currently underway elsewhere come from the privatization of ports and the liberalization of port activities. «*Around the world ports are being privatized and liberalized. Central governments, by intent or directive, are increasingly reducing their financial commitments to ports.*»¹² These economic measures seem to have improved the situation in ports, favoring a better level of efficiency and a more organized management. Furthermore, the economic independence from the state has so far permitted some kind of public-private partnerships to finance port development and expansion. The modern multimodal port structure is thus located mid-way between the sea and the urban fabric and its nature has become definitely multipurpose. Thanks to their central strategic position, ports have the pivotal role to open the door to the distribution of freights towards the hinterland, determining their gateway function in the international market. At this point, finding a reference market which is suitable to port position and aspirations in the commercial field becomes essential, since port geographical location is no longer the only parameter available to determine the success or failure of a commercial activity. Any port

¹⁰ Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013, p. 6

¹¹ Ibid., p. 7

¹² Slack B., *Globalisation in maritime transportation: competition, uncertainty and implications for port development strategy*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 74

structure that aspires to occupy a leadership position into intermodal transportation mechanism must create itself an ambitious trade basin beyond national borders, and this is possible only shaping efficient logistic chains for the distribution of goods.¹³ Soriani and Zanini have identified some of the main trends that ports are called to face nowadays, among which can be listed factors such as the increasing size of container ships, the growing influence of shipping companies over the success or failure of a port, the reshaping of port structure and the significant changes occurred in port governance.¹⁴ Of course, all those variables are closely linked together, since the expansion of port spaces and the renovation of infrastructures have often stemmed from the need of ports to remain competitive at the national and international level, even if the global conditions for freight transportation have considerably changed over years. Basically, a port which does not react promptly to the modifications of global markets ceases to be competitive and paves the way for its own exclusion from the main commercial routes. The integration level of a port into its adjoining territory has become one of the primary conditions to be satisfied in order to be attractive for actors operating in world trade. The restructuring of port spaces and the changes occurred in port governance represent two very challenging aspects to handle. The former, in fact, has created difficulties for many ports, in particular for those located in regions subject to a particularly strict environmental regulation or those arisen inside urban areas which have, therefore, scarce possibilities to expand or further problems of connection with inland terminals. The latter, instead, deals with port management in terms of increasing its efficiency and competitiveness at the regional and international level. Nowadays, port institutions are called to make thoughtful money investments aimed at improving the efficiency and attractiveness of ports, but in cooperation with an ever increasing number of actors and in compliance with ever careful environmental regulations.¹⁵ In an highly competitive economic framework, as it is the case today, ports that want to stay in the game have to be ready to politically and economically react to the changing

¹³ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 55

¹⁴ Soriani S. and Zanini F., *Trasporto marittimo, transhipment e porti nel Mediterraneo. Evoluzione recente e prospettive di sviluppo*, 2010, p. 924-925

¹⁵ *Ibid.*, p. 925

situation, because the mere geographical position is no longer enough to lead the field.

1.1.2 Competitiveness between ports in the globalization era

The concept of *globalization* is not simple to approach. One of the reasons is that there are countless points of view and several debates around the origins of this trend. The term refers to the international integration and increasing interconnection deriving from the exchange of goods, products and cultural aspects between different countries. Some scholars have identified its beginning in the modern era, while others have placed its origin even before the age of European geographic discovery of the New World.¹⁶ In any case, the interdependence between economies has been growing since the beginning of the twentieth century and the use of the term *globalization* has been spreading considerably since the 1980s-1990s.

It is interesting to investigate how the globalization process has affected the transportation field so far. In the opinion of many scholars, the first stages of globalization in the mobility environment date back to the time of great geographical discoveries, when the development of maritime transportation paved the way for the expansion of physical and temporal horizons and the reduction of distances.¹⁷ Transportation-by-sea strategies, in particular those concerning the transport of minerals and power sources, have changed following two main events: the relocation of production areas and the reopening of the Suez Canal, occurred in 1975. The former caused the involvement of developing countries in international trade, and the latter was an important economic, but also political, turning point because from that moment onwards a more convenient commercial route was made available.¹⁸ Thus, the real innovation brought by globalization is the possibility to choose both the itinerary for the transportation of goods and people and the trade partners. This

¹⁶ Vanolo A., *Geografia economica del sistema mondo*, Torino, UTET, 2010

¹⁷ Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013, p. 4

¹⁸ Vallega A., *Geografia delle strategie marittime. Dal mondo dei mercanti alla società transindustriale*, Milano, Mursia, 1997, p. 245

is the reason why it does make sense to relate the concept of globalization with that of competitiveness: in fact, in a system in which more and more actors are entering the market, the combination of services offered by each of them is more relevant than it used to be. As far as the maritime field is concerned, for example, the smartest way to ensure that a shipping company decides to call in a port rather than in another, is to prove to be efficient and time-saving in dealing with port operations.

Globalization has made increasingly possible to open national markets towards a global arena in which also developing countries and peripheral areas that before played marginal roles in international economy can finally participate actively in world trade. «*In a global economy, no nation is self-sufficient*»¹⁹, and that is exactly the bright side of globalization. Thanks to the growing interdependency between economies, each country can concentrate on the production of less products and then exchange them. In this way, and maybe oversimplifying the whole matter, the variety of available products on the market and, consequently, the need for international transportation, increase resulting in lower overall prices and higher economic integration between nations. Production chains are no more concentrated within a single state, but are split into a multitude of production centers situated in different countries, that need to connect with each other to come to the realization of the final product.

But how all that affects port industry? The maritime field is a constantly evolving environment, and the impact of globalization on ports in particular is extremely remarkable, even though it has crucially influenced all other transportation modes as well. Globalization of world traffic flows together with the outsourcing of production areas has largely contributed to the modification of the roles and functions of regional and national ports.²⁰ This change has taken place following the internationalization of commercial relations and the ever-increasing economic power and potential of the new developing countries. And moreover, both the liberalization of markets and the technological evolution of port activities brought by globalization

¹⁹ Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 144

²⁰ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 25

has led to the falling of barriers to global trade and the openness of economies. Though these transformations can be considered as outcomes of globalization, the premises which made them possible are to be found in the first industrial revolution, the transition period which involved Europe between 1760 and 1840 approximately. Undoubtedly, the most noteworthy shift which influenced economic evolution from then on was the introduction of the factory as leading actor in the production cycle.²¹ As a result, the production rate increased sharply and the same happened to traffic flows, which became oriented beyond national borders and towards wider commercial spaces. Beside the integration between ports of different countries, the main consequences of this commercial expansion were a diversification of the range of transported products and a deeper-than-before relationship between traffic flows and final consumers.²²

Competitiveness between ports has always existed. Up from ancient times, they have always competed between each other seeking to conquer new markets and to find unknown commercial routes in order to excel in traffic flows.²³ In the attempt of improving its position in the economy, each port used to put money in infrastructural renovation and to intervene in the promotion of better links with the hinterland.²⁴ Thus, the majority of actions undertaken have always been focused on the eventual increase of productivity of the port itself, but a substantial difference can be found between now and then. While before each port was more or less architect of its own destiny, and it could choose whether to intervene or not, and especially how to do it, today the decision-making power is more and more often in the hands of other actors, such as shipping companies and, somewhat, final users as well. In the globalization era, therefore, the competitiveness of a port consists in its ability to offer services that are compatible with its users' need.²⁵ However, differently from the past, there is no guarantee of success behind whatever port interventionist

²¹ Vallega A., *Geografia delle strategie marittime. Dal mondo dei mercanti alla società transindustriale*, Milano, Mursia, 1997, p. 49

²² Ibid., p. 83

²³ Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 68

²⁴ Ibid., p. 68

²⁵ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.163

program, and so those that before were leading actors in trade relations, with the advent of globalization become inert and vulnerable in the face of commercial strategies and organizational decisions made by others.

In the face of a literally global transportation system, and this is the case today, ports are no longer isolated entities that only occasionally happen to communicate with the international context. Ports are, on the contrary, deeply interconnected realities perfectly integrated in the logistic chains and indispensable for the proper working of international trade. Nowadays, a port is constituted by a number of different subjects that act together in the interest of the port as a whole. They are expected first of all to collaborate and to communicate within each other, and then they are called to act at an external level in order to promote the image of the port against competitors. Although the port is a single entity, it is formed by a variety of agents whose task and interest is to act as a whole. Port structure is becoming more complex, and this is why keep thinking about ports like mere crossing points for passengers and freights is an outdated concept. The favorable geographic position is no longer enough to be successful in the trade realm; in order to stay in race in the global economy, ports have to develop new strategies and implement policies which must be consistent with the epoch we are living into. As suggested by the FLC book on ports and their hinterland, the perception we used to have about coastal settlements as final destination of goods must shift towards a port regionalization process in which these structures become real gateways deeply integrated in a supply chain shaped by port related activities.²⁶ The great transformations in world economy caused by globalization, first among all the remarkable increase in trade rate, the enlargement of Europe through the accession of new eastern members and the new potential revealed by Asiatic markets, assume the form of a double-edged weapon, especially for European economies. The opening of markets, in fact, may result either in an good opportunity for success, or in a disastrous failure which can bring to commercial isolation. The ability of a port to compete can be evaluated from its inclination to implement changes in functions, structure and policy.

²⁶ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 2

Globalization has changed the perception we used to have about distances, and greatly reduced transportation time as well. This is the main reason why efficiency and operating speed are maybe the most important characteristics a port needs to have in order to be chosen by shipping companies. Very often, this choice is based on a careful evaluation of the reliability of the entire logistic chain in which a port is inserted, rather than on the merits of the single unit as such.²⁷ This happens because an highly productive port can be located into a weak commercial chain and vice versa. Production systems at this point are answering to increasingly global logics thus, willing or not, ports and maritime transport need to adapt to the current situation if they want to maintain their own competitive advantage over other means of transport.

Today, it is more difficult for ports to compete also because the basic services they once provided are no more adequate for the global logics which govern the world today. As customers became more demanding, ports that want to remain competitive inevitably have to satisfy their requests providing additional services and improving efficiency. Given that ports are no more the main actors shaping international trade, a port which offers a great variety of value-added services has more possibilities to attract traffic flows because it creates an efficiency gap with ports providing only traditional services. Basically, the more a port adapts itself to the major changes it is involved into, the higher are its probabilities not to succumb to the new mechanisms of international trade.

²⁷ Slack B., *Globalisation in maritime transportation: competition, uncertainty and implications for port development strategy*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 70

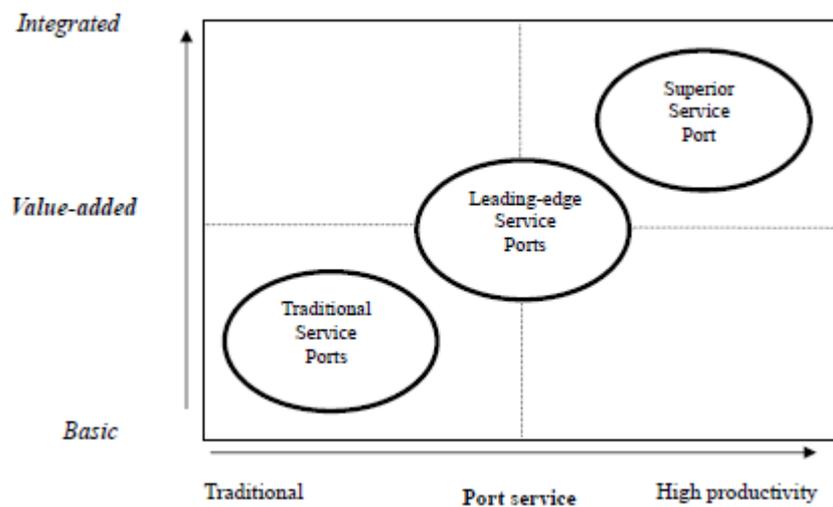


Figure 1: Matrix of competitive advantage concerning ports (source: UNITED NATIONS, *Commercial Development of Regional Ports as Logistic Centres*, New York, 2003, p. 21)

As shown in the figure above, it is the the quality of services provided to determine the competitiveness and the level of productivity of a port. Even if the need for traditional port services still exists, in the future «we will see the dominance of superior service leaders that possess both a productivity advantage and a value-added service advantage»²⁸, especially in industrialized countries. Ports providing only basic and traditional handling service will be overcome by leading-edge and superior service ports for the simple reason that the latter kind of services are closer to customers' needs. Technology, and in particular ICT (Information and Communication Technology), is one of the most recommended means a port should employ in order to move right or upwards in the matrix, respectively towards a productivity advantage or an ever more integrated value-added services, thus improving its position within the supply chain. Of course, technological advancement may result in an increase of the productivity of a port system, but the major problem arises from the fact that in many cases the same know-how is available also to competitors.²⁹ With no doubts, this is one of the drawbacks of globalization, or better said, it is at the same time a positive and a negative aspect of this new international trend. In fact, on the one side the increasing accessibility to technology and communication systems is a window of opportunity for ports worldwide; on the other side, however, the wide spreading of value-added logistic services inevitably

²⁸ UNITED NATIONS, *Commercial Development of Regional Ports as Logistic Centres*, New York, 2003, p.22

²⁹ Ibid., p. 21

makes it even tougher for a port to excel over competitors in the maritime field. In this global economy, it has become extremely difficult to possess something different to offer, and the risk is the uniformity of markets. In such circumstances, therefore, each hub participating in international trade needs to find innovative solutions from time to time, with the purpose of attracting as many customers as possible.

But how should ports take on all the challenges presented by this new era? Every port structure is involved in the new global economic system and, for this reason, it needs to react as soon as possible to international changes. As pointed out by Slack, generally speaking the way port authorities have responded to the new competitive pressures has been of two types: trying to keep pace with the evolution of markets or implementing policies based on users' demands. In the first case, port authorities started a series of projects addressed to the spatial expansion of the port itself, adapting operational spaces and docks to the bigger size of the ships calling. The second approach, on the other hand, was aimed at satisfying customers' requests. Policies and strategies pursued as well as port infrastructures and facilities provided were thus adopted responding to the demands coming from shipping lines, since they seemed to be the new client to accommodate.³⁰ But, according to Slack, the problem caused by this approach is that very often the purpose of satisfying the client has come without careful evaluations of environmental, financial and commercial impacts of such interventions. As he notices, this way to respond to the new challenges of globalization has resulted in awkward situations such as the availability of too many port and container facilities compared to the effective need of new infrastructures, or in the underutilization of several port terminals.³¹ These solutions, it goes without saying, turn out to be unbearable and not sustainable and their outcomes clearly suggest that the means ports can exploit in order to be architect of their own destinies are increasingly more limited.

³⁰ Slack B., *Globalisation in maritime transportation: competition, uncertainty and implications for port development strategy*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 77-78

³¹ *Ibid.*, p. 78

1.2 CONTAINERISATION AND INTERMODALITY

1.2.1 Intermodal freight transportation and containers

Intermodal transport is a modality which can exist both for passengers and for freight movement. Focusing on the intermodal freight transport, its definition provided by OECD is the following: *the movement of goods (in one and the same loading unit or a vehicle) by successive modes of transport without handling of the goods themselves when changing modes.*³² The advantages of this method over other ways of transport are many, going from reduced costs and the saving of time to the improvement of the security level, since it permits to reduce risks of damage and loss of transported goods. We can speak of intermodalism when at least two different modes of transport are involved in a trip from an origin to a destination³³.

A crucial point when talking about intermodalism is technological advancement, and this is because the more the technological component is improved, the more the transfer of goods from one mode to another results easy. But despite the universally recognized evidence of this fact, the main obstacle to the development of an intermodal transportation network is the lack of integration between the different modes. As Rodrigue has pointed out:

«Competition between the modes has tended to produce a transport system that is segmented and un-integrated. Each mode has sought to exploit its own advantages in terms of cost, service, reliability and safety.[...] All the modes saw the other modes as competitors, and were viewed with suspicion and mistrust»³⁴

At a first glance, this sounds like an extremely obsolete concept if compared to the global situation we are living into, but unfortunately it is more current than it seems, and it is exactly there that lies the reason of the failed cooperation between different modes of transport. Competition has been too long conceived like something that rewards a mode but penalizes the other rather than being viewed as the starting

³² OECD Glossary of Statistical Terms, see: <http://stats.oecd.org/glossary/detail.asp?ID=4303>, last updated on April 29, 2003 (last accessed in March 2014)

³³ Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 114

³⁴ *Ibid.*, p. 114

point for a real integration between all of them. This wrong way to see it has not given to each mode the possibility to reach its full potential, and has resulted in segmentation and unreliability of the whole transportation chain.

Before approaching the issue of containers and how this relatively new transportation solution has affected freight transportation in general, it is worthwhile dwelling briefly on the main typologies of maritime cargo. Transport operations and means used, in fact, can vary considerably when changing the nature of transported goods. A first basic distinction should be made between bulk cargos and unitised freight handling. The former refers to *commodity cargo that is transported unpackaged in large quantities*³⁵, and can be distinguished into dry bulk cargo – for example minerals, coal, grain, wood and iron – or liquid bulk cargo – for example oil and such, liquefied natural gas and some chemical products. This former solution is still largely used, but it is the latter that represents today the great majority of freight international transportation. In fact, it is for the transportation of a huge variety of commodities and products in the same cargo unit that the container was introduced in the second half of the twentieth century. The shipment of materials through packagings such as sacks and boxes has been almost completely replaced by the unitised freight handling. With regard to this second solution, there can be two different transportation modalities: on the one hand the LO/LO and on the other the RO/RO and RO/RO Pax. The former abbreviation stands for Lift-On/Lift-Off and indicates those vessels that have on-board cranes in order to load and unload cargo, while the latter stands for Roll-On/Roll-Off ships which, on the contrary, are those vessels *designed to carry wheeled cargo, such as automobiles, trucks, semi-trailer trucks, trailers and railroad cars, that are driven on and off the ship on their own wheels or using a platform vehicle*.³⁶ The latter are generally bigger vehicles, since they presume the presence of ramps that allow the efficient rolling of the cargo in and out of the ship when in ports, while the LO/LO vessels may also not have on-board equipment to complete successfully the loading and unloading of the cargo, and in that specific case they can use the dockside container cranes to this purpose. The term RO/RO Pax, instead, is used to indicate a ship that contemplates

³⁵ See: http://en.wikipedia.org/wiki/Bulk_cargo (last accessed in June 2014)

³⁶ See: <http://en.wikipedia.org/wiki/Roll-on/roll-off> (last accessed on June 2014)

also the passengers service, being thus designed for the transportation of automobiles, caravans, and all other means of transport related to human use.

By its definition, a container is «*a large standard-size metal box into which cargo is packed for shipment aboard specially configured oceangoing containerships*»³⁷, and its shape and size standardization make it extremely adaptable for freight transportation both for short and long distances. The introduction of containers dates back to 1950s, and the innovative idea which would have revolutionized the shipping industry is to be attributed to Malcom McLean, an American transport entrepreneur, since then known as the *father of containerization*.³⁸ His great insight has derived from his job as a truck driver, during a delivery of cotton bales in 1937, when he was forced to wait hours before having the possibility to unload his truck:

« *I had to wait most of the day to deliver the bales, sitting there in my truck, watching stevedores load other cargo. It struck me that I was looking at a lot of wasted time and money. I watched them take each crate off the truck and slip it into a sling, which would then lift the crate into the hold of the ship.*»³⁹

Almost twenty years later, McLean put his innovative idea into practice and in 1956 the first example of shipping container came into being. In that year, the maiden voyage from the New Jersey to Houston took place, and it was closely followed by authorities and governments. It served the purpose of demonstrating that the container was a secure freight transportation mode, and so it proved when the cargo was inspected once the ship docked in Houston.⁴⁰

The greatest genius of McLean's insight was in the replacement of the traditional method of handling dry goods by shipping more pieces at once and at a cheaper price. Having the opportunity to carry hundreds of trailers on one ship obviously permitted to cut transportation costs and to make any shipment faster than it was

³⁷ Glossary in Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 257

³⁸ See: http://en.wikipedia.org/wiki/Malcom_McLean (last accessed in July 2014)

³⁹ Mottley R., *The Early Years: Malcolm McLean*, American Shipper, 1 May 1996; quoted in Mayo A-J and Nohria N., *The Truck Driver who Reinvented Shipping*, excerpted from Mayo A-J and Nohria N., *In Their Time: The Greatest Business Leaders of the Twentieth Century*, Harvard Business School Publishing Corporation, 2005

⁴⁰ Ibid.

before. The idea of transporting on wheels detachable-from-truck trailers presents the possibility to use different means of transport for the same cargo unit, making the delivery faster by using the railway or the ship for the major part of the supply chain, and keeping road transportation only for the last mile. Furthermore, advantages of this new method were not only in terms of speed of the service, but also in terms of environmental gain, since freight transportation by train or ship is much more ecologic than the road modality. Implementing the idea of container shipping signified also to avoid overweight shipments, which was a very important step forward if considered that each state had a different regulation concerning the weight of cargo and that truck drivers frequently happened to be fined for transporting too much weight.⁴¹ Once arrived at ports, containers were detached from trucks and placed on barges that transferred them to other ports, where they were removed and re-placed again on truck trailers beds to be transported to warehouses and then to final consumers.

All of this continues to happen today, but with substantial technological innovations. Among the most important there is the introduction of communication technology into all aspects of freight delivery. This means that all the actors involved in the shipment are always updated on the development of this stage and on all possible problems for the whole duration of the transportation from a place to another. Having the opportunity to track cargos not only means being up to date on the shipment, but also helps to save time and money, since, being all the transport operators aware of the progress of orders, they are always prepared in time to intervene in case of drawbacks or simply to complete their part of the job. Another innovation brought by the introduction of containers has been the modernization of port sites in order to accommodate the new way of dealing with port operations. The newly-introduced method for intermodal transportation needed wider empty spaces in order to stack containers waiting to be transferred and to make possible the new procedures of lifting and moving trailers.⁴² Both ports and cargo ships, therefore,

⁴¹ See: <http://www.northcarolinahistory.org/encyclopedia/340/entry/> (last accessed in July 2014)

⁴² Mottley R., *The Early Years: Malcolm McLean, American Shipper*, 1 May 1996; quoted in Mayo A-J and Nohria N., *The Truck Driver who Reinvented Shipping*, excerpted from Mayo A-J and Nohria N., *In Their Time: The Greatest Business Leaders of the Twentieth Century*, Harvard Business School Publishing Corporation, 2005

were redesigned to adapt to the bigger size of containers compared to the previous bulk cargo.

Containerisation brought a general increase in the efficiency of port and freight transportation operations, so that prices and shipment time have decreased thanks to a better management of the supply chain.⁴³ However, in order to obtain all the above mentioned absolute advantages, ports have faced over the years huge money investments oriented to the modification of port sites for adapting to the new transportation method and becoming more competitive at an international level. Port industries all over the world have put a lot of money on the renovation of their terminals and infrastructures in the attempt to become important ports of call for the most powerful shipping liners and enjoy the benefits that this prominent position would have entailed, but the exclusive control over commercial routes depends on many factors, some of them independent from the mere technological advancement of the port. To invest in a container terminal is the only way port authorities have to enter the business, but there is no guarantee of success.⁴⁴ Actually, this is one of the disadvantages of the introduction of the container as a new transportation means; the high cost of infrastructures needed, often not affordable for several developing countries, and the extreme complexity of the logistical management of this method do not assure that all the money invested will be regained in terms of traffic flows or prominence of the port in question. As Rodrigue has pointed out, in fact, «*the management logistics of containers [...] requires high levels of information technology for the recording, positioning and ordering of containers handled.*»⁴⁵ Among the drawbacks of their usage, he has listed some other disadvantages such as the great consumption of space – the minimum needed by a 25,000 tons-containership is twelve hectares of free space – and the problem of empty travels and illicit trade. The former derives from the fact that often containers must be shipped back empty after unloading them, and this is a loss of money and time since,

⁴³ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.165

⁴⁴ Slack B., *Globalisation in maritime transportation: competition, uncertainty and implications for port development strategy*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 69

⁴⁵ Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 117

either full or not, a container occupies the same big amount of space on the ship or in the warehouse. The latter, instead, consists in the spreading usage of containers for the illicit trade of drugs, weapons and immigrants, thanks to their structure, anonymous from the outside.⁴⁶

As a matter of fact, such enormous financial investments made on ports can be absorbed by increasing considerably the volume of traffic flows, and the first step in that direction is to improve the speed and efficiency of the port service.⁴⁷ To this purpose, the *transshipment* ports network system came into being. This model answers positively to the need of a faster service, which can be obtained through the reduction of the staging time of ships in ports and the drastic decrease of the number of calls made by container ships. The quantity of ports in which the cargo ship is supposed to stop is now considerably reduced, and those in which this still happens are called *hub ports*.⁴⁸ The main characteristics that distinguish transshipment ports from the others are deep-water basins, that allow the docking of huge containerships, and the presence of wide spaces and equipped distriparks in port sites, such as to permit the movement and storage of containers. Of course, all these aspects are to be considered interesting exclusively if combined with a strategic geographical position of the port itself. But port sites were not the only in having to adapt to this new transportation system. In order to cut prices and make the freight delivery service faster, in fact, containerships have tremendously increased in size, so that they can contain more goods than before and it is possible to concentrate different deliveries into the same cargo unit. The huge size of these new oceangoing ships has led many ports to be excluded from the main international commercial routes due to the lack of characteristics and equipment necessary for the management of big amounts of freight arriving on a regular basis. To the so called *hub port* are associated a number of feeder ships, that are smaller vessels supposed to carry a limited number of containers to other port sites, linking in that way the hub to minor ports from which freight are then distributed into the hinterland.

⁴⁶ Ibid., p. 117

⁴⁷ Pascetta C., *I trasporti marittimi: tra squilibri strutturali e funzionali*, in *Il Mediterraneo. Geografia della complessità*, a cura di Fuschi M., FrancoAngeli, Milano, 2008, p. 171

⁴⁸ Ibid., p.171

Through the *hub and spoke* system it is possible to supply with an increasing variety of freight a higher number of ports, even those not adequately equipped to welcome big cargo ships, or those located in geographical areas where the volume of traffic flows is not enough to justify the direct call of huge container ships.⁴⁹ The most revolutionary change brought by the introduction of containers has been the achievement of a more efficient transportation service at a cheaper price, made possible thanks to a widespread coverage of almost all commercial areas of the world and the differentiation of port sites functions and roles by their own physical and organisational characteristics.

1.2.2 Linking the port to the transportation network

The main actors in the intermodal transportation chain are the subjects which deal with the management and coordination of the different steps involved in the distribution of goods. All these subjects participating in the logistic chain are generically called MTO (Multimodal Transport Operator). According to the United Nations Convention on International Multimodal Transport of Goods signed in Geneva on May 24, 1980:

«Multimodal transport operator means any person who on his own behalf or through another person acting on his behalf concludes a multimodal transport contract and who acts as a principal, not as an agent or on behalf of the consignor or of the carriers participating in the multimodal transport operations, and who assumes responsibility for the performance of the contract»,⁵⁰

where the consignor is *any person by whom or in whose name or on whose behalf a multimodal transport contract has been concluded with the multimodal transport operator*.⁵¹ Some examples of MTOs may be shipping lines or freight forwarders, as they can undertake the role of the carrier and offer all the different modes of

⁴⁹ Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013, p. 14

⁵⁰ <http://www.jus.uio.no/lm/un.multimodal.transport.1980/doc.html>, article 1 - Definitions (last accessed in June 2014)

⁵¹ <http://www.jus.uio.no/lm/un.multimodal.transport.1980/doc.html>, article 1 - Definitions (last accessed in June 2014)

transport necessary to ensure the delivery of goods, covering both sea and land transportation.

As already mentioned, the intermodal freight transportation consists in the movement of goods through at least two different means of transport using the same loading unit, without the transfer of the cargo from one mode to the other. This mechanism, if the transportation network is efficient and the coordination between all the different modes is well-organized, permits to realize the door-to-door delivery, which is a substantial economic and strategic value added for the economy nowadays. However, in order to achieve this, it is necessary to improve the connections between the already existing transportation structures and to create new state-of-the-art infrastructures over the territory.

When approaching the issue of intermodality, choosing the right transport modality in each different part of the transportation chain is more than essential for the success of the freight delivery as a whole. Included in the concept of Intermodal transport, we can find that of Combined transport, which is somewhat more specific. According to the definition provided by the UIRR (International Union for Road-Rail Combined Transport) and accepted by the European Union, the ECMT (European Conference of Ministers of Transport) and the UN/ECE (United Nations Economic Commission for Europe), Combined transport consists in:

«Intermodal transport where the major part of the journey, in Europe, is by rail, inland waterways or sea, and any initial and/or final legs carried out by road are as short as possible.»⁵²

Generally speaking, the most common intermodal combinations are those between sea-road and rail-road transportation modalities. As far as sea-road cooperation is concerned, the transfer of goods from the port to the final destination involves the already mentioned LO/LO transportation through containers and the RO/RO and RO/RO Pax maritime traffic flows.⁵³ As it emerges from the 2013 FLC analysis, there should be a physical division of spaces and traffic flows between loading unit types,

⁵² See: <http://www.uirr.com/en/road-rail-ct.html> (last accessed in July 2014)

⁵³ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 57

in order to set up an efficient planning of freight distribution.⁵⁴ This desirable separation not only would lead to a better organization of the whole transportation chain, but also would help to make the delivery service faster and more accurate. It goes without saying that the necessary condition to ensure that freight distribution goes smoothly is a substantial improvement of road connections between ports and the hinterland. However, although this fact is well acknowledged, many obstacles remain to its realization. The main difficulty is perhaps the interference coming from the secondary roads, which are supposed to bring traffic flows towards a local dimension, into the main road network that links the port structure to the final destinations of cargos.⁵⁵ Of course, the main consequence of this involvement of the secondary road network into the leading one is a significant speed reduction which affects the whole transportation chain efficiency. In this context we can find again the competitiveness factor: in a world in which the pace of the market is increasingly tight, where productivity and speed in freight delivery are of paramount importance, any delay is without a doubt a minus. From the practical point of view, a company that is about to make a shipment will certainly choose the operator which guarantees the shortest delivery time at the best price, obviously.

The road transportation mode is still the dominant land transport system today, and the reason is that it presents more positive than critical aspects. Among advantages we can easily count the initial cost and the speed of vehicles, respectively relatively low and relatively high if compared to other means of transportation. Furthermore, as Rodrigue has pointed out, one of the most noteworthy aspects of road transport is *«the flexibility of route choice, once a network of roads is provided. Road transport has the unique opportunity of providing door-to-door service for both passengers and freight.»*⁵⁶ The relatively low initial price makes the purchase of vehicles more accessible and, consequently the road transportation field results highly competitive. However, there is another side of the coin and that is the problems caused by road transportation, such as congestion and the negative environmental impacts derived

⁵⁴ Ibid., p. 57-58

⁵⁵ Ibid., p. 58

⁵⁶ Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 102

from the use of this kind of means. The most alarming factors are the dramatically growing pollution and the increasing quantity of dangerous CO₂ emissions which has become *a serious impediment to the quality of life and the health of urban populations*.⁵⁷ According to Rodrigue, *«congestion occurs when transport demand exceeds transport supply in a specific section of the transport system. Under such circumstances, each vehicle impairs the mobility of others.»*⁵⁸ This kind of problem is the troubling consequence of the fact that the number of vehicles that employ roads as ways of communication and routes for freight and passengers displacement grows faster than the infrastructural equipment necessary to host them. This unfortunately means that anytime the physical capacity of transport infrastructure is overtaken, what follows are travel delays and bottlenecks, especially close to crossing points or particularly strategic areas.

With regard to another massively employed intermodal transport combination, that is the rail-road solution, it combines the positive aspects of both modalities. As pointed out in the UIRR website, *«on the one hand, rail can carry large quantities of freight over long distances, and, on the other hand, road vehicles provide the flexibility needed for regional distribution»*⁵⁹. Because of its advantages, the employment of the road-rail integrated transport has witnessed an extremely rapid diffusion over the last century or so:

*«In the course of the 43 years since the founding of the UIRR, road-rail CT traffic has grown to an extent that neither the railway undertakings nor the political champions of this mode of transport, principally found in Germany, Switzerland and France, then in Austria and in Italy, could ever have imagined. At the end of the 80s, the growth of UIRR traffic had achieved results more or less equivalent to those of maritime container transport, with annual increases in excess of 20%.»*⁶⁰

The UIRR is a European organization which deals with the promotion of intermodal transportation, focusing in particular on the combination of these two modalities.

⁵⁷ Ibid., p. 192

⁵⁸ Ibid., p. 193

⁵⁹ See: <http://www.uirr.com/en/road-rail-ct.html> (last accessed in July 2014)

⁶⁰ See: <http://www.uirr.com/en/our-members/some-figures.html> (last accessed in July 2014)

Founded on 23rd October 1970 in Munich on the occasion of the second international transport exhibition, it counts today fifteen members among transport companies all over Europe.⁶¹ The main objectives of the organization are summarized as follows:

«Internal co-ordination of the work covers all the activities aimed at harmonizing or reconciling the work procedures and the methods and systems of management between the different member companies so as to facilitate access to CT (Combined Transport) everywhere in Europe.»⁶²

Members of the UIRR are the major operators in terms of the amount of transferred freight as far as the intermodal railway transport is concerned.⁶³ But transport companies, if alone, are not enough to accomplish a successful intermodal freight shipping from an origin to a destination. The necessary condition for an improvement in terms of efficiency of this transport combination is, therefore, the planning of a long-period series of interventions for the modernization of the already existing rail structures and the creation of some new railway complexes. Obviously the initial expense foreseen for this purpose is so high that it results hardly bearable both for private and public investors, but a better infrastructural endowment is the only way to increase the competitiveness of intermodal transportation in the face of the more fragmented transport mode it was usually employed before.⁶⁴ Once the infrastructural system has been improved, the following necessary step to be taken is the integration of the railway freight transportation system with the other actors involved in the logistic service, since the real value added, both economic and environmental, of the intermodal transportation is the offer of a good service resulting from the coordination and cooperation of different transport operators in the same logistic chain.⁶⁵

⁶¹ See: <http://www.uirr.com/en/our-association/history.html> (last accessed in July 2014)

⁶² See: <http://www.uirr.com/en/our-association/activities.html> (last accessed in July 2014)

⁶³ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 74-75

⁶⁴ *Ibid.*, p. 60

⁶⁵ *Ibid.*, p. 75

Although «*rail transport is a green system, in that its consumption of energy per unit load per km is lower than road modes*»⁶⁶, the road transportation mode continues to be the prevalent over short inland distances, and in particular for the so-called *last mile*, the fulfillment of which can be realized only through this latter modality. Once a cargo has arrived at a big hub, which can be a freight station or a port, it needs to be transported to its final destination. In order to be economically and environmentally sustainable, the railway segment of the freight transportation must be the predominant in the road-rail combination, and the road operator is supposed to conclude the transportation cycle, dealing with the last pick-up of the cargo addressed to the door-to-door service, which is the final part of the chain.⁶⁷ This last leg of freight transportation «*is often the least efficient link in the supply chain, comprising up to 28 percent of the total cost of the delivery*»⁶⁸. It goes without saying that this percentage is far above the acceptable cost that the final part of the itinerary should have. Of course, the incidence of the last mile on the total price of the delivery can vary depending on factors such as the grade of accessibility to final destinations or the quality of infrastructures employed to reach them, but in the majority of cases it is calculated to be very high comparing to the rest of the journey. It is definitely true that solving what is known as *the last mile problem* is one of the most demanding challenges for the global economic development and improvement, but it is equally true that an innovative solution to this can change a problem in a real opportunity for success in international trade.

⁶⁶ Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 103

⁶⁷ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 77

⁶⁸ Coupland E. on behalf of Parcel2Go.com, *The 'last mile' Problem*, November 04, 2013. See: <http://www.supplychaindigital.com/logistics/3355/The-last-mile-problem-by-Parcel2Go> (last accessed in July 2014)

CHAPTER II

EUROPEAN REACTIONS TO CONTAINERIZATION AND INTERMODALITY

2.1 WINNERS AND LOSERS IN THE EUROPEAN GAME

2.1.1 Initiatives for port re-qualification

The international trends that have been spreading worldwide since the second half of the twentieth century, first and foremost the globalization and the consequent expansion of markets, have deeply affected the role of ports inside the supply chain. Another aspect that have resulted from these new tendencies is a considerable shift in our perception of port sites, that were previously considered as pretty closed and small entities used for passengers and freight movement only at a local level. Nowadays, as a consequence of globalization and the internationalization of markets and trade, ports have acquired a prominent role in commercial routes and they function as remarkable logistical platforms into global networks of production and distribution of goods. Of course, a changing reality needs a changing background behind it, that is an economic environment able to adapt in a relatively short time to the modernization of infrastructures and of the system in general. The most challenging tasks in this direction are those of making the port sites as competitive as possible and integrating them into the transportation network both at a local and at an international level. In a report prepared for ESPO (European Sea Port Organization) in 2010, Notteboom clearly pointed out the importance of connecting the port to the other network operators in a profitable way: *«The more international the maritime and port industry becomes, the more energy will have to be put in embedding the port in the local community»*.⁶⁹ Basically, it is not sufficient for a port to innovate its internal structure if this happens in absence of a system of well-

⁶⁹ Notteboom T., *Dock labour and port-related employment in the European seaport system: key factors to port competitiveness and reform*, report prepared for European Sea Port Organization (ESPO), Antwerp, University of Antwerp, ITMMA, May 2010, p. 15

organized inland connections, since a port which is not part of a commercial network cannot reach its full development potential.

There are many aspects that need to be improved in order to embed a port site into an important commercial network so that it determines its economic success. An essential aspect not to be underestimated is, for example, the promotion of a positive public image of ports. This is the tough challenge which has been taken on by port sites in a variety of different ways, such as the presentation of data about the employment index and the added value created by them, or the sponsorship of public events linked to port areas.⁷⁰

In that respect, one of the initiatives that deserves more attention is the redevelopment of waterfronts. Changes that have occurred with the spreading of globalization worldwide, both the new role and functions conferred to ports and the significant modification in our attitude and the way of considering them, have resulted in a general transformation of the physical structure of the port itself. It was exactly in this context that port sites felt the absolute need to increase in size in order to adapt to the new mechanism of containers handling. But, since the sea and the important inland waterways have always represented the primary source of wealth for all the big cities of the past, the great majority of large urban agglomerations used to rise very close to the coastal environment. Many ports, therefore, did not have the possibility to expand in the direct proximity of their original core because of the presence of the city right behind them, and they consequently were forced to move into the hinterland, bringing the corresponding waterfronts to be abandoned. In this regard, the tendency which has materialized over the recent years is the re-development of these coastal areas that have been left aside since the structural transformation of port sites. The awareness of the importance of waterfronts re-qualification is even more underlined by the emergence of associations and corporations in support of these kind of initiatives. The following statement, as an example, is taken from *The Waterfront Center*, a corporation born in 1991 to that purpose:

⁷⁰ Ibid., p. 15

«Waterfronts, the unique places where land and water meet, are a finite resource embodying the special history and character of each community. Urban waterfronts, like the cities they help define, are dynamic places. The last three decades have witnessed profound changes along abandoned or underused waterfronts. The trend is accelerating in cities around the globe. It applies to canals, lakes and rivers as well as coasts»⁷¹

The conversion of waterfronts into flourishing places is obviously a long-term issue, but, once completed, it can bring benefits such as new job opportunities and a strong incentive to local commerce, thanks to a renovated positive image of the port, that help bringing tourism and investments. Revitalized port sites can host a variety of activities, both leisure and service facilities for citizens and tourists, becoming in this way a multifunctional area able to offer a wide range of employment opportunities.⁷² It goes without saying that such re-qualifications affect positively the economy of maritime countries, that see a transfer of the high value added activities towards the hinterland and a good opportunity to exploit the long abandoned coastal areas which have often contributed to a boom in investments, tourism, employment and population never seen before.⁷³ Hotel and accommodation sites for an increasing number of visitors have become an ever-present characteristic in the renewed maritime waterfronts, as well as the most requested services by tourists and residents, that considerably vary from port to port. The majority of these new activities are closely related to the port function and its specific historical heritage; it will suffice to consider the prospering of cultural initiatives such as the introduction of port museums and exhibitions.

Another very profitable strategy of success in the re-qualification of waterfronts is to turn them into cruise terminals. This kind of activity, unlike the industrial handling and storage of containers and the organization of shipments, needs to be located

⁷¹ See: <http://www.waterfrontcenter.org/about/manifesto.htm> (last accessed in August 2014), document issued by the Waterfront Center, July 10, 1999

⁷² Notteboom T., *Dock labour and port-related employment in the European seaport system: key factors to port competitiveness and reform*, report prepared for European Sea Port Organization (ESPO), Antwerp, University of Antwerp, ITMMA (Institute of Transport and Maritime Management Antwerp), May 2010, p. 16

⁷³ *Ibid.*, p. 16

near the city center in order to be attractive for tourism, and this is exactly the case of most urban waterfronts.⁷⁴ The projects aiming at giving new light to underutilized or disused coastal areas represents a two-way advantage for a maritime country, since, on the one hand, it manages to maintain its position of focal commercial point by transferring into the hinterland all the activities dealing with the organization and management of containers and inland freight shipments, notably to freight villages. On the other hand, the restoration of abandoned waterfronts which have become inadequate to the newly-introduced containers transportation system, brings substantial economic revenues deriving from tourism and investments. Furthermore, besides the promotion of the port as an attractive workplace for young generations through the offer of favourable working conditions and good job positions, the key to the future development lies in the understanding of the multi-cultural potential of ports and their international scope.⁷⁵ As a matter of fact, the more a port has an international dimension and the more it finds itself in the favourable position of attracting foreign investments, which are welcomed because they considerably contribute to the port total income.

At this point, after this brief digression on the positive socio-economic impact of re-developing old waterfronts and promoting a positive public image of ports in order to maintain their focal commercial position or become competitive in the globalization and containers era, it is worth noticing how maritime countries have reacted to these recent trends, especially at a European level. As it is easy to imagine, the reactions of European countries have been the most varied, even if it is possible to make a clear distinction between countries in the North of Europe and those that directly face the Mediterranean sea. The tough competition that has always involved the North and the South has determined winners and losers in the European game, depending upon a variety of different factors, among which the physical characteristics of the territory are no longer the guarantee to succeed. In the framework of this global economy, some ports have reacted much more promptly than others, obtaining a good name in Europe, but also worldwide, and that has resulted in a steady increase of traffic flows and prestige.

⁷⁴ Ibid., p. 17

⁷⁵ Ibid., p. 18

2.1.2 The winners: Northern Range ports

After the presentation of some of the possible solutions that have been at the disposal of ports in order to adapt themselves to the new configuration of international trade, it is worth making some further considerations and operating a suitable distinction between winners and losers in the European theatre.

So, what kind of reactions have had the European maritime countries to containerization and intermodality? First of all, it must be said that there is no much point talking about Europe as an homogenous set of ports, due to the fact that none unanimous reaction has taken place with regard to this issue. Different responses have brought to divergent results in terms of capacity, power to attract traffic flows and success in general. What has actually occurred is an imbalance of the number of containers handled, and of the income deriving from their transportation, in favour of the Northern Range ports system, a condition that has obviously had strong negative repercussions on the Mediterranean port industries.

In spite of being located in a relatively marginal position compared to the rest of the European continent, and especially with respect to the main commercial routes towards the Far East, the undisputed winners of the European game are the Northern Range ports, the superiority of which is commonly recognized and accepted worldwide. This preeminence over the ports of the Mediterranean sea is due first of all to geo-economic and geopolitical reasons, and then is the result of a series of accurate choices and successful policies in the maritime field.

In the opinion of some scholars, this success of Northern European ports concerns «*time, costs and rail-based intermodal services*»⁷⁶, facilities that in the maritime countries of the Baltic region are respectively lower and more present and organized than their Southern counterpart. The international spreading of containerization since the past century has brought a huge increase in the numbers of the global freight transportation and a growing understanding of the importance of the

⁷⁶ Cazzaniga Francesetti D. and Foschi A. D., *Mediterranean versus Northern Range Ports. Why do Italian containers still prefer routing via the Northern Range Ports? Advice for a new policy*, IAME (International Association of Maritime Economists), Panama, 2002, p. 1

utilization of the rail mode for inland shipment of goods. The first to realize the importance of using massively the rail mode instead of trucking for an efficient and sustainable intermodal transportation were the Northern European terminals, which first rethought their rail network, thanks to an high level of expertise and know-how of their operators.⁷⁷ Furthermore, these ports are supported by very lively markets in the hinterland right behind them and can take advantage of an age-old experience in the field of maritime traffics.⁷⁸ Differently from the historical character of most Mediterranean ports, Northern European ports are of relatively recent construction, and this means that they did not have to face the problem of finding new space for their expansion. Actually, they have expanded rapidly and in close proximity of their original cores without overlapping their corresponding cities, but rather originating large consumption markets in the direct hinterlands around them. This closeness between ports and their corresponding freight sorting and distribution centers takes the form of a significant advantage of the Northern Range ports system over the Mediterranean, and has certainly contributed to the superiority and internationally acknowledged success of ports of the Baltic region. A strategically successful approach which has been massively adopted by the Northern European maritime countries is that of grouping together seaports located within the same area to form multi-port gateway regions.⁷⁹ The main purpose of this strategy is that of strengthening the cooperation between ports of the same geographical area in order to attract as much traffic flows as possible both in import and in export, since *«in cases there is no coordination between the ports concerned, the hinterland is highly contestable as several neighboring gateways are vying for the same cargo flows»*⁸⁰. As can be observed in the figure below, the area where the Northern European ports are located is characterized by clusters of ports rather than independent port sites, and this is because *«stand-alone gateways are somewhat isolated in the broader port system, as they have less strong functional interactions with adjacent ports than*

⁷⁷ Ibid., p. 4

⁷⁸ Ibid., p. 4

⁷⁹ Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012, p. 5

⁸⁰ Ibid., p. 6

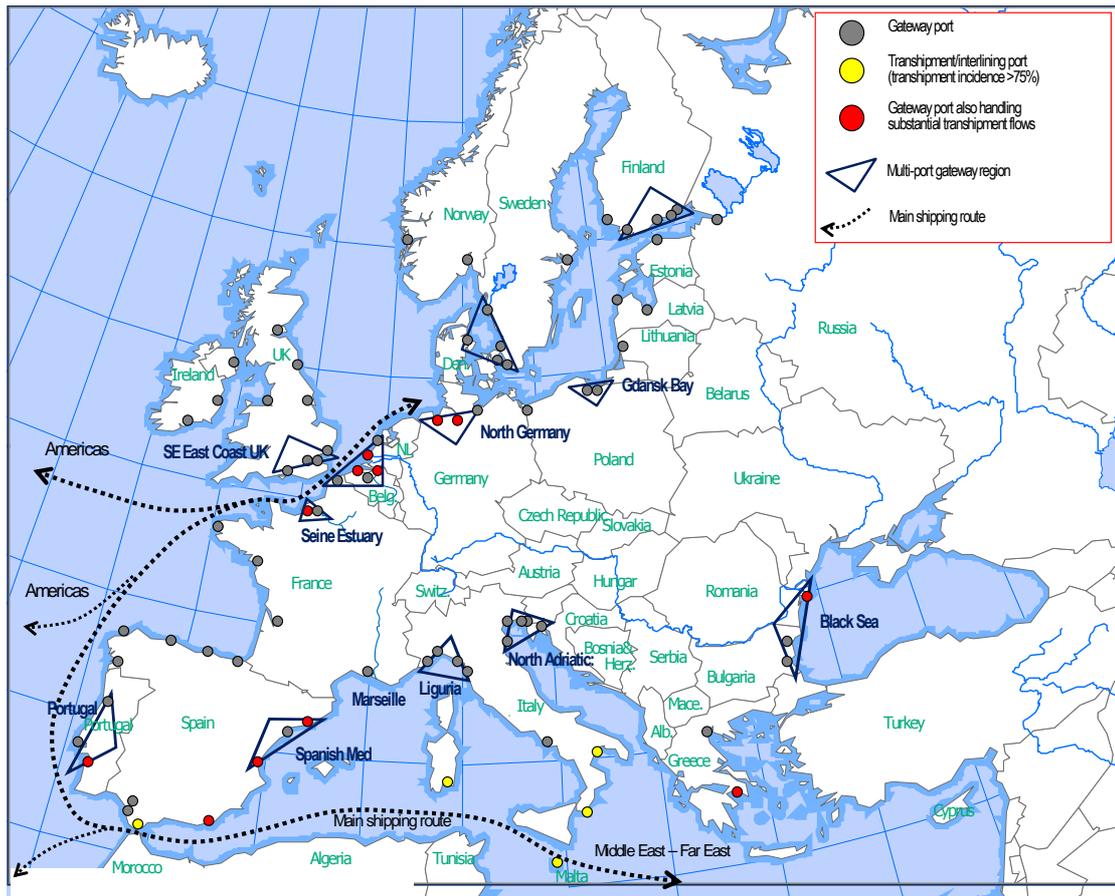


Figure 2 : The European container port system and its multi-port gateway regions (source: Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012, p. 6)

ports of the same multi-port gateway regions»⁸¹. The creation of new corridors for the transportation of goods has brought a double advantage, both for the port and for the hinterland. On the one hand, in fact, the maritime gateways work to their interest since the penetration of the inland territory significantly broadens their consumers base. On the other hand, the regions in the hinterland have realized that the fact of establishing efficient links with the most ports represents an important strategic advantage from the commercial standpoint.⁸² Furthermore, it helps improving the position of inland economic centers and preventing those areas from becoming commercially isolated and, therefore, marginalized or excluded from international trade. In addition, upgrading already existing corridors and creating new transportation links means that more routing options are made available, thus affecting positively a kind of travel flexibility for shippers, and this is something the Northern European ports and distribution centers have well understood.

⁸¹ Ibid., p. 6

⁸² Ibid., p. 16

The success of that ports system stems exactly from that awareness, and demonstrates that grouping together ports with similar characteristics and the identical consumers base makes it easier to create a dense network of links to the hinterland, which is the base for an efficient transportation service within the port territory and its immediate surroundings. As a result, the amount of containers handled is much more significant in Northern European ports than in the Mediterranean, even if recently several ports in the South have been moving towards intermodalism, in particular in the West Med. Due to the fact that a lively import-export activity and vast reference markets lie right behind them, the majority of the big ports that face the Baltic sea do not rely on the *hub and spoke* system for freight transportation.⁸³ This implies that they are not minor ports depending on a hub, but rather gateway ports often clustered in the already mentioned multi-port gateway regions. Northern Range ports are mainly final destination ports, so they do not owe their success to transshipment activities, even if some big transportation companies have their bases in this area. The main reason is that «*ports specialized in transfer of containers between ocean-going vessels are usually located near the main routes*»⁸⁴, namely in the Mediterranean sea, which is geographically the shortest way from the Far East to continental Europe.

But why do international shippers generally prefer routing via the Northern Range even if the Mediterranean gateways could offer advantages in the transit time of containers over the flows coming from Asia and the Far East? Besides the already mentioned high level of expertise and efficiency, given by a consolidated know how in the maritime field and up-to-date infrastructures, some other essential aspects are to be taken into account. Closely related to the dense networks of links that characterize the hinterland of the bigger maritime cities in Northern Europe is the relatively low cost of the last leg in freight transportation, which is among the most important variables in determining the commercial power and attractiveness of a port. As a matter of fact, the costs that mostly influence the competitive power of a

⁸³ Cazzaniga Francesetti D., *Italian versus Northern Range port competitiveness: a transportation cost analysis in Chinese trade*, in *European Transport* n. 30, 2005, p. 45

⁸⁴ Thorez P. and Joly O., *Port Competition in the Northern Range from Le Havre to Hamburg*, in *Promet – Traffic&Transportation*, Vol. 18, 2006, No. 2, p. 81

port system are those concerning the final part of the supply chain, rather than those involved in the entire maritime leg from the origin to the destination in Europe.⁸⁵ It is exactly there that lies one of the advantages of the Northern Range port system over its Mediterranean counterpart. While the former manages to cut prices over inland distances by having big reference markets in the immediate hinterland, the latter has to face high inland costs for the transportation of goods over quite big distances, generally from a big transshipment hub to minor ports in the same country. Therefore, even if in terms of distances Mediterranean ports are the best transit option to serve markets in continental Europe, they lose their international appeal because of higher costs for inland freight transportation and the loss of an additional couple of days which the cargo needs in order to reach its final destination from the hub in which it has been unloaded.⁸⁶ Northern European ports attract container traffic flows coming from continental areas in Europe which are, de facto, geographically closer to Mediterranean ports such as Genoa or Trieste in Northern Italy. This happens because of the high reliability of the Northern Range big ports in the management and realization of inland transportation with moderate costs and without delays, if compared to the Mediterranean slowness of the bureaucratic machine in getting freight transfers done. Basically, the additional time and costs invested in routing via Northern Europe are then partly or totally recovered when dealing with inland freight distribution towards the final destination of goods.⁸⁷

According to what affirmed by Notteboom in a 2012 paper, «*some 40% of containers leaving or arriving in Antwerp by truck are coming from or going to markets within a radius of 50km of the port. The most significant distance class for Rotterdam is the 150-200km radius*»⁸⁸. This statement clearly summarizes how, notwithstanding the globalized transportation system and the broad openness of markets of the last decades, a significant proportion of the consumers base of Northern Range ports is still represented by their immediate hinterland. As stated by Notteboom in his

⁸⁵ Cazzaniga Francesetti D., *Italian versus Northern Range port competitiveness: a transportation cost analysis in Chinese trade*, in European Transport n. 30, 2005, p. 49

⁸⁶ Ibid., p. 49

⁸⁷ UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008, p. 31

⁸⁸ Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012, p. 11

analysis, an high percentage of container flows handled by many Northern European large gateways are generated by the port city or the local hinterland, which thus remain the backbone of ports' commercial base.⁸⁹ Maritime countries in Northern Europe give preference to freight distribution within national borders, this being definitely made easier by the massive presence of European Distribution Centers (EDCs) near major ports in those areas. Located in the hinterland, these logistic centers have the main function of sorting incoming containers and regrouping the cargo, often after some value-adding manipulations, for the realization of the so called *last mile*, which normally occurs by truck.⁹⁰ Over time, the high concentration of this kind of logistic centers in Northern European hinterlands has brought to the development of out-and-out inland terminals in those areas. Obviously, this gradual change has facilitated the management of freight transportation within the supply chain and has brought to a useful division of tasks between seaports and inland ports operators, which are in any case in close contact in order to offer an efficient service to customers.

Figure 3 well illustrates the important role played by the local hinterland in the inland distribution of goods both by truck and by rail or barge. Among the seven presented maritime cities, the most self-evident example of freight distribution within national borders is Le Havre, out of which *«about 89% of the land transport flows are linked to France»*⁹¹. Also German port cities such as Bremen and Hamburg address the most part of the incoming freight to the domestic market, while with regard to the Belgian case, *«about half of the land-based container flows of the Belgian ports of Zeebrugge and Antwerp has an origin or destination in Belgium»*⁹². As far as Rotterdam is concerned, a great percentage of traffic flows are linked to the Netherlands, but then the remaining part is distributed in more or less similar proportions into the neighboring countries such as Belgium and Germany.

⁸⁹ Ibid., p. 11

⁹⁰ Ibid., p. 12-13

⁹¹ Ibid., p. 12

⁹² Ibid., p. 12

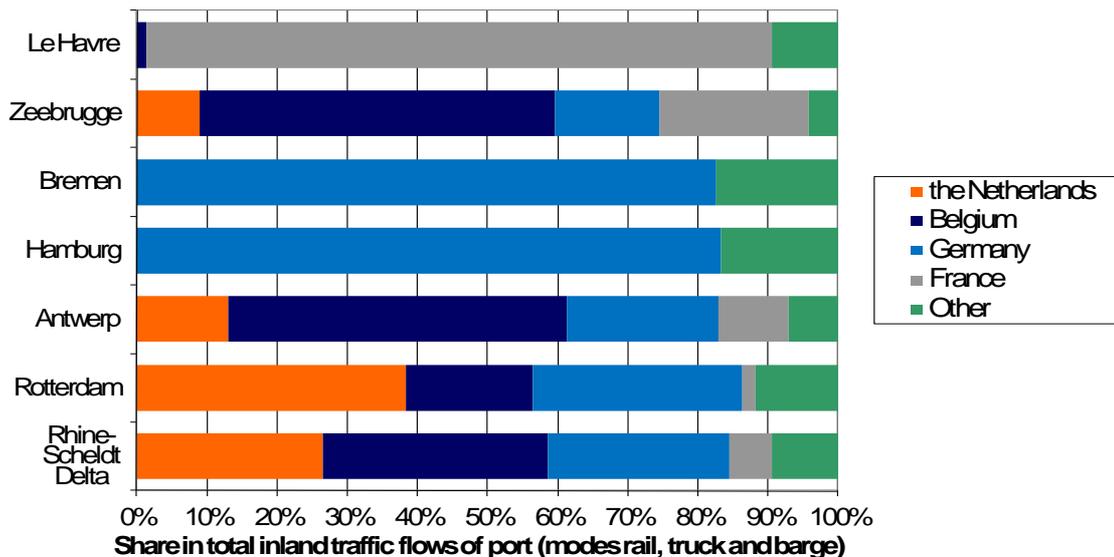


Figure 3: The hinterland distribution of container flows in some of the main container ports of the Northern Range system – estimates for 2007 (source: Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012, p. 12)

Whether it occurs within national borders or in foreign countries, freight distribution is heavily dependent upon the efficiency and reliability of transportation, and the competitiveness of a region depends upon these factors as well. Actually, as outlined by Notteboom in his paper, «*the logistics attractiveness of large parts of Belgium and the Netherlands for the location of European distribution centers (EDCs) is partly due to the existence of an high connectivity in several efficient gateways in the Rhine-Scheldt Delta*»⁹³ This statement once again outlines how some elements such as the efficiency, reliability and good organization of shipments demonstrated by Northern Range seaports and inland ports have contributed to their success and superiority over their Mediterranean counterpart.

Besides all the already mentioned aspects which have determined the superiority of Northern European ports, there is also a social factor which it is worth considering. The gradual changes of recent decades have occurred in a positive business environment, which is of foremost importance for the favorable acceptance and the realization of reforms and structural interventions. The fact of operating in an almost strike-free environment has facilitated the introduction of new technologies, such as containers or advanced ICT systems employed for tracking cargos and for information exchange between the operators involved in the transportation chain.

⁹³ Ibid., p. 14

Information and communication technology applied to transportation has substantially increased terminals productivity and improved the competitive position of Northern Range ports on the national and international stage. The ICT component is fundamental in order to guarantee an high-level service and save as much time as possible in port operations. However, that technology alone is not enough for the quick transfer of freight from the sea to land transportation modes and vice versa, but the achievement of that goal requires also the presence of modern terminals, good accessibility for big ships and a good level of coordination and integration among all the operators involved.⁹⁴ With the support of information and communication technologies in the coordination of all the different steps involved in intermodal freight transportation, each operator have the opportunity to know in advance where the cargo is or if there have been any problems in the supply chain development. This monitoring of transportation chains helps a faster and better organized handling of the incoming cargo, which in Northern European ports have resulted in one of the most efficient services worldwide.

In conclusion, Northern Range ports have reacted with the awareness that the right answer to the new trends of the last decades was to adapt to the changing situation in order to remain competitive and have success at an international level. There are many more competitors to deal with, therefore to be part of the game implies, now more than ever, having something more than them to offer. Ports in Northern Europe have taken advantage of a quite good geographical position to realize new projects and infrastructures which could give them a return in terms of traffic flows and economic revenues. They have understood that in this globally oriented world the mere geographical location of the port is no more the guarantee to succeed, since it is challenged by other factors, such as high level of efficiency and know how, the presence of a positive business environment, fast shipments and low costs, in particular those involved in the last mile. In recent years, the focus of competition is not located only on ports, even if they continue to be important commercial nodes. Ports in the Northern Range have developed a variety of strategies to face the

⁹⁴ Thorez P. and Joly O., *Port Competition in the Northern Range from Le Havre to Hamburg*, in *Promet – Traffic&Transportation*, Vol. 18, 2006, No. 2, p. 78

increasing competition, which is shifting from port sites to the hinterland and the efficiency of the links to reach it.⁹⁵

2.1.3 The losers: Mediterranean ports

The Mediterranean sea has always been at the crossroads of different cultures, lively markets and commercial routes between countries, in particular from and to the East of the world. Located in a strategic position at the heart of international economic exchanges, it has played for centuries the extremely important role of gateway for the passage of goods. At present, Mediterranean ports geographically enjoy, de facto, the most prominent position with regard to international traffic flows, offering considerable advantages in the transit time of container ships, if compared to the ports of the Northern Range. This competitive advantage over Northern Europe takes the form of about five days of navigation which can be saved in preferring the Mediterranean sea route for the shipping of goods coming from Asia and the Middle East. However, given that, as already mentioned, nowadays competition does not regard only the port site itself, but also the quality of connections with the hinterland, too often the ports facing the Mediterranean basin are not in the position to attract Eastern traffic flows because of their low level of connectivity. The main difficulty so far recorded in Southern European ports lies in the inadequate extension of hinterlands through railways to be used for the delivery of freight to their final destinations, that is obstructed by the lack of big markets and distribution centers in the vicinity of ports, which does not provide the necessary motivation to broaden the hinterlands and increase the communication services with them. For this reason, the areas adjoining Mediterranean ports remain much smaller than those in the Northern Range, thus causing a kind of impossibility to realize frequent and rapid connections between the port and the hinterland.⁹⁶ Intermodal links through railways are too weak to be able to welcome and distribute all over Europe the big quantities of freight coming from the East. Taking Italy as an example, its central

⁹⁵ Ibid., p. 77

⁹⁶ Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012, p. 16

position could be the gateway for Europe in the Mediterranean, but its national railways system suffer from serious limitations. In that case, obstacles to the development of a widespread transportation network are both physical – the way towards continental Europe is made more difficult by the presence of the Alps – and managerial – the excessive burden of bureaucracy.⁹⁷ Italy will not be in the condition of aspiring to become the bridge linking the Mediterranean sea to continental Europe until the quality and quantity of its intermodal railway connections to central European markets improve. The strategic importance of efficient port services and widespread networks of links is even clearer when a centrally located maritime country that lacks these elements, such as Italy, is bypassed by shipping companies and international terminalists, that prefer investing more money in a longer commercial route in which, however, the speed of port operations, the quality of intermodal connections and the on-time freight distribution are guaranteed.

Among the classical determinants for the selection of a port of call there are the ability to adapt to the changing global environment, in particular in the infrastructures field. In this regard, ports are asked to modify their physical structure and accessibility requisites, which have to be suitable to welcome ever bigger container ships. Therefore, terminals that want to remain competitive at the international level are constantly under pressure because of the necessity to extend their docks and to adapt the depth of their channels to the increasing size of ships. However, one of the major disadvantages of the Mediterranean ports lies in the fact that, differently from the Northern Range ports system, they have developed inside urban areas, and this makes the possibilities of further expansion very scarce. From the Mediterranean standpoint, this turns out to be a real problem for the ports of the basin, because, unfortunately, shipping companies are increasingly oriented towards a streamlining of the time and costs of freight transportation. This result is achievable fabricating ever bigger container ships, thing which makes possible to increase the amount of goods transported whilst reducing the number of ships employed, of course contributing to a substantial price cut. Because of both physical and managerial limitations, ports in Southern Europe often have not faced this

⁹⁷ Foschi Alga D., *The maritime container transport structure in the Mediterranean and Italy*, Discussion Papers del Dipartimento di Scienze Economiche – Università di Pisa, n.24, 2003, p. 25

changing situation in the most far-sighted approach available. While for shipping companies it is relatively easy to quickly adapt to the changes in world economy and trade, for ports it is slightly different. Their reactions are, de facto, less elastic because they need to deeply intervene in their own structure in order to remain up-to-date with the highly changeable international economic environment.⁹⁸ Of course, this represents a serious problem for ports in general, since their adaptability to the developing global framework requires a certain amount of time, which is longer than the time necessary to shipping companies to take the decision of changing route. As a matter of fact, they tend to bypass a port that has difficulty to modify its structure according to customers demands, in the majority of cases with regard to availability of wider spaces, the quality and speed of port operations and the improvement of connections with the hinterland. It is no coincidence that a large portion of traffic flows coming from the East are diverted via the Northern Range ports system, which, whilst suffering from a serious problem of congestion, can boast anyway a more efficient network of intermodal connections and a wider variety of services provided, due to a rational use of existing resources, both material and physical, such as a dense geological network of inland waterways to be used for freight distribution to the markets in the hinterland.⁹⁹ Therefore, it seems clear that shipping companies prefer relying on a more congested and somewhat expensive system of ports that, however, guarantees an efficient service and relatively short time for port operations to be completed, rather than take the risk of a delayed or more problematic delivery, which could be the case if routing via the Mediterranean basin.

Another important aspect is the already mentioned problem of the accomplishment of port operations within the established time frames, since the quicker port operations are completed, the sooner the dock will be made free for the arrival of another container ship that need to be unloaded.¹⁰⁰ If compared to the ports of the Northern Range, Mediterranean ports tend to be cheaper with regard to the services

⁹⁸ Palazzari V., *I nostri porti soffocano*, in *Limes – rivista italiana di geopolitica* – n. 4/2006, pp. 217-223, p. 218

⁹⁹ *Ibid.*, p. 220

¹⁰⁰ Notteboom T., *Dock labour and port-related employment in the European seaport system: key factors to port competitiveness and reform*, report prepared for European Sea Port Organization (ESPO), Antwerp, University of Antwerp, ITMMA (Institute of Transport and Maritime Management Antwerp), May 2010, p. 34

provided inside the port, but they are dreadfully slower in the development of port operations, loading and unloading cargo. Therefore, given that one of the main goals of most shipping companies is to save time in terminal activities, they are inevitably attracted by those ports which offer facilities such as fast loading and unloading operations and short waiting times of the ship at the quay. Moreover, the availability of 24 hours and 7 days services is considered a plus and, for this reason, is determinant when choosing a port instead of another. In this framework, Mediterranean ports once again suffer from the lack of a real efficient service, which is undermined the excessive burden of bureaucracy with regard to port operations and an overall bad use of what could be the best geographical position in Europe. As stated by Notteboom in his 2010 report, *«shipping companies are willing to accept higher terminals costs during weekends and at nights if these additional costs are compensated by savings in time costs of the vessel»*, and shortly afterwards *«[shipping lines] would rather like the terminal operator to deploy additional cranes and hire extra men and work them overtime, if the ship has to sail on time»*¹⁰¹. Unfortunately, Mediterranean ports do not satisfy all those conditions mainly because of their general organizational inefficiency, which results in a low level of integration between different operators and modes of transport and in a scarce quality of intermodal connectivity between port sites and the hinterland. While they have risen their reputation in the maritime field, improving their position and efficiency, they remain extremely weak from the land point of view, suffering from inadequate intermodal rail links, poor port integration in the logistic chain and insufficient coordination between transport operators. In other words, the ports facing the basin fail to implement a common and far-sighted approach to the problem. It goes without saying that all these factors have an extremely negative impact on the economies of most Mediterranean maritime countries. On the one hand, in fact, shipping companies tend to prefer the commercial route via Northern Europe instead of calling their ships at Mediterranean ports, and, on the other hand, foreign companies do not find attractive to invest their money on Southern European port terminals.

¹⁰¹ Ibid., p. 34-35

In the late 1990s, the global economy underwent a fundamental change of which Mediterranean ports should have taken advantage. The growing relocation of European production centers from Europe towards the Far East area brought to a significant shift in the direction of international traffic flows. As the power of the Far East in international economy increased, the strategic importance of the Mediterranean basin in freight transportation network was ever clearer. In a 2003 discussion paper, Foschi well described the great shift occurred in the role of the Mediterranean basin between the last two decades of the past century:

«In the eighties the Mediterranean was considered a market apart that was separately connected to Asia, North America and North Europe. [...] In the nineties the biggest shipping companies decided to incorporate the Mediterranean in the oceanic routes»¹⁰²

Situated in a central geographical position and easily accessible from the Suez Canal, in fact, Southern European ports were found to be the best option for the shipping of goods addressed to continental Europe, and in particular to the so called *blue banana*, an heavily urbanized corridor in the heart of Europe where the major consumption centers are located and which *covers one of the world's highest concentrations of people, money and industry*¹⁰³. According to the SRM (Studi e Ricerche per il Mezzogiorno) annual report 2011, the economic growth of the Far East and its incidence on the international market have made the Mediterranean sea the most profitable gateway for about a 15 percent of the global traffic flows.¹⁰⁴ As shown by the figure below, this has entailed an higher growth rate in containers handling between 1997 and 2003 in Mediterranean ports if compared to the Northern Range maritime system, trend that, however, has reversed during the following four years, between 2003 and 2007.

¹⁰² Foschi Alga D., *The maritime container transport structure in the Mediterranean and Italy*, Discussion Papers del Dipartimento di Scienze Economiche – Università di Pisa, n.24, 2003, p. 3-4

¹⁰³ See: http://en.wikipedia.org/wiki/Blue_Banana (last accessed in September 2014)

¹⁰⁴ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.137

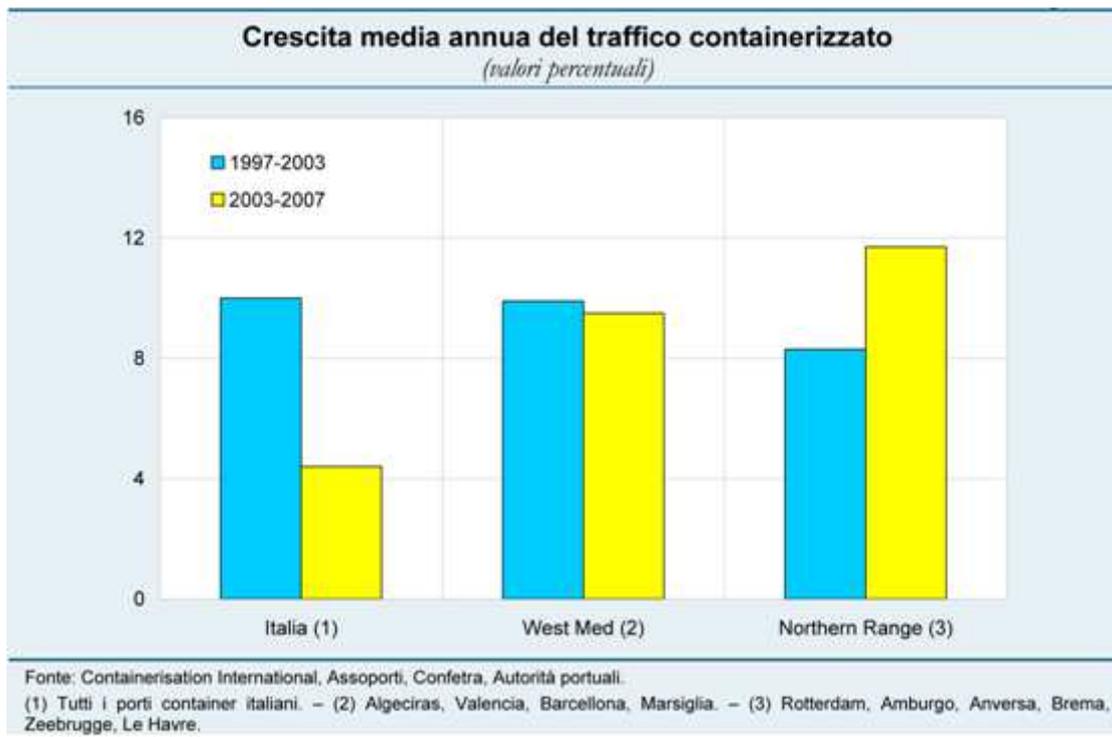


Figure 4: Average annual growth of container traffic flows – percent values (source: Beretta E., Dalle Vacche A. and Migliardi A., *Il sistema portuale italiano: un'indagine sui fattori di competitività e di sviluppo*, Occasional Papers, n.39, Banca d'Italia, Eurosystem, 2009, p. 10)

While in the West Med the percentages related to the different periods of time are more or less similar to one another, the Italian and the Northern Range situations represent a different case. On the one hand, Italy between the late 1990s and the early 2000s managed to intercept a huge amount of containers thanks to its location at the heart of the Mediterranean sea, which has been extremely favourable to become one of the main countries of call for ships coming from the Far East. Moreover, the role of transshipment played by the more exposed Italian ports, such as Gioia Tauro, Cagliari and Taranto, facilitated the creation of an *hub and spoke* system in the Mediterranean basin, which has been fundamental for the increase of the concentration of traffic flows in that area. It is worth noting, in addition, that in this period Italian ports went through a privatization process following the coming into force of the law 84/94, which brought to a better management of ports and quays and, more importantly, helped Italian port sites to become more attractive for foreign investors and shipping companies.¹⁰⁵ On the other hand, we find the Northern Range port system, which was severely challenged by this power shift

¹⁰⁵ Beretta E., Dalle Vacche A. and Migliardi A., *Il sistema portuale italiano: un'indagine sui fattori di competitività e di sviluppo*, Occasional Papers, n.39, Banca d'Italia, Eurosystem, 2009, p. 9

within commercial traffic flows towards the Mediterranean sea and, in fact, during the same six-year period registered a lower growth rate in containers handling, whilst maintaining an important volume of traffic flows. However, as can be seen in the figure, that situation considerably changed between 2003 and 2007. Italian average annual growth in containers handling fell from about 10 per cent to 4,4 per cent, that was less than half the annual growth registered in the 1997-2003 period, while in the Northern Range the same value went from 8,3 per cent to almost 12 per cent.¹⁰⁶ From the Italian standpoint, this inversion was caused by a slowdown in ports development and by a weak growth rate of the GDP if compared to the main competitors in the euro area. Both these aspects are closely related to the impasse situation the national economy has been suffering from since the early 2000s. In the period in which trade flows coming from the Far East reached their full potential, there have been two diametrically opposed reactions in Europe. On the one hand, Northern Range ports have been able to meet the challenge, providing efficient and reliable delivery services to Eastern economies thereby establishing with them a lasting commercial cooperation. On the other hand, Italian ports, that de facto could benefit from one of the most strategically important geographic position as far as East-West traffic flows are concerned, have lost their international appeal because of factors such as internal economic problems, scarce connectivity with the hinterland, inadequacy of port and land infrastructures, inefficiency and unreliability.

Another aspect which contributes to weaken the position of Mediterranean ports in the international arena is the high level of individuality that characterizes them. Nowadays, the world economy is organized and based on networks, which are obviously constituted of singular nodes which are supposed to be in communication between them. The same applies to the transportation industry, ports and inland terminals should take the form of individual gateways well integrated in a complex network of nodes and links which cooperate between each other. The well known success of Northern Range ports at the international level largely stems from the awareness that the deep integration of the port site into a well-organized networks of services is as important as the quality of the service provided. As a matter of fact,

¹⁰⁶ Ibid., p. 9-10

the more the network of links is dense and structured, the more a multi-port gateway region is attractive for foreign investors and shipping companies. This is the concept which lies at the base of service and communication skills of ports facing the Baltic sea and, at the same time, is also what Mediterranean ports have failed to achieve so far. They benefit from an excellent geographic position, but the other side of the same coin is the inadequacy or even lack of a network of intermodal links with central European markets, thing that in the long run has heavily penalized the economy of countries facing the Mediterranean basin. Today, «*the strategy of the large world terminalists is the network*»¹⁰⁷ and the reasons behind the important existing gap between the North and the South of Europe in the number of containers handled are to be found in the different reactions that maritime countries have developed in that direction. On the one hand, Northern Range ports have organized themselves in the already mentioned multi-port gateway regions, in which a production specialization has taken place in order to achieve a division of functions and a distribution of different tasks among the ports belonging to the same cluster. Their strategy consists in the adoption of a scheme where «*the complementarities are identified and strengthened in order to increase the competitiveness of the whole system rather than internal competition*»¹⁰⁸, creating in that way a network in which each port is an individual efficient entity that contributes to the success of the whole regional cluster. On the other hand, the Mediterranean area is characterized more by division than by cooperation. The prevalent trend in this region is the competition between ports of different countries, but geographically belonging to the same region, that, in the attempt of attracting as much traffic flows as possible, have failed to understand that this approach contributes to weaken the already compromised position of the Mediterranean sea in the international economic scenario. Ports in Southern Europe, therefore, are in competition, but not competitive. This means that they compete between each other and do not prove to be attractive for foreign shipping companies, which tend to bypass the shortest transportation route by preferring to ship goods via the ports of Northern Europe. In such an highly

¹⁰⁷ Foschi Alga D., *The maritime container transport structure in the Mediterranean and Italy*, Discussion Papers del Dipartimento di Scienze Economiche – Università di Pisa, n.24, 2003, p. 25

¹⁰⁸ Ibid., p. 25

competitive economic environment, Mediterranean ports should aim at gaining and keeping their international customers, through particular conventions and preferential treatments, so that the commercial relationship between the port and the international operators it deals with is long-lasting.¹⁰⁹ It goes without saying that this condition would be profitable both for the economy of maritime countries and for customers, since the former would benefit from scheduled traffic flows and the latter would enjoy favourable trade conditions that would give the necessary guarantees for the setting-up of privileged and enduring commercial exchanges. Unfortunately, because of the lack of these premises, the mare nostrum is far from being conferred the role of protagonist in East-West commercial relations, at least until the plurality of actors of which it is composed is not coordinated and integrated into a more organised European hierarchy. This is a series of missed opportunities that make the Mediterranean lose its place in the international scenario.

Overall, Mediterranean ports and intermodal services need a common approach to be formulated and a common strategy to be adopted in order to face the evolving situation of the international scenario. To ensure that the Mediterranean region is not only a mere transit area for the huge amount of freight coming from the Far East, but a real protagonist of global trade, a series of rapid and targeted interventions need to be promoted and implemented. Ports, operators and governments have to be coordinated in the achievement of each step forward, both in the infrastructures field and in the policy approach.

¹⁰⁹ Soriani S. and Zanini F., *Trasporto marittimo, transhipment e porti nel Mediterraneo. Evoluzione recente e prospettive di sviluppo*, 2010, p. 931

2.2 EUROPEAN PORTS POLICY

2.2.1 The call for a European common regulation

The vital importance of ports for the European commercial environment derives from the fact that they act as gateways for the huge amount of freight that from the coasts are distributed through the rest of the continent. According to data of the European Commission, 74% of goods entering or leaving Europe go by sea¹¹⁰, therefore it is easy to imagine the reason why the idea of a necessary revitalization of the port industry is today broadly supported. The alarming factor derives from the fact that one fifth of that 74% involves just three ports, namely Rotterdam, Hamburg and Antwerp.¹¹¹ This is surely worrying from a Mediterranean perspective, as all ports in question belong to the Northern Range system, but it affects negatively also the European ports sector as a whole, since it creates an imbalance between the performances of ports in the North and in the South of Europe, causing bottlenecks and congestion, that result in extra costs for the operators and users of the transportation services. Given that shipping companies turn to the more performing ports, the most of times facing longer journeys in order to find the better service provision, some areas are inevitably affected by a serious problem of congestion, while other port areas are largely underutilized.¹¹² Again, the inefficiency of a single part of the system penalizes the entire supply chain.

Because of historical, geo-economic and political reasons, the European port system presents, de facto, a significant efficiency and productivity gap between the North and the South of the continent. However, beyond these evident existing differences, and given that Europe should be a coherent superior entity formed by a multitude of actors, the major need is for a common regulation that keeps the distinctive features of each single country but at the same time gives the continent a greater internal equilibrium between the parts. Each port is diverse and characterized by different

¹¹⁰ See: http://ec.europa.eu/transport/modes/maritime/ports/ports_en.htm (last accessed in October 2014)

¹¹¹ EUROPEAN COMMISSION, *Commission proposes upgrade for 300 key seaports*, IP/13/451, Brussels, 23 May 2013

¹¹² EUROPEAN COMMISSION, SPEECH/13/451 by S. Kallas, *Europe's ports: a vital gateway to the rest of the world*, Brussels, 23 May 2013

skills and competences, often also in conformity with its geographical position which contributes to determine its function in the complexity of the world system. So, the uniqueness of each port has to be safeguarded and preserved, nonetheless in the context of the necessary setting up of a common European vision for the port sector and a shared strategy to achieve successful results in that field. As stated in the ESPO Green Guide published in 2012, the purpose of a document providing options and approaches in order to act in that sense should be:

«to trigger port authorities to be proactive and to commit to sustainable development and the continuous improvement of their environmental performance, [...] without losing sight of the fact that port authorities find themselves with different challenges to face, have different financial and regulatory powers or capacities to act upon those challenges and finally, have a different track record and history of environmental management and performance.»¹¹³

Every port, therefore, is free to act in accordance with its own institutional and economic characteristics, but this should not become an excuse for inaction or scarce adjustment to the changing global situation, especially in terms of full compliance with the environmental regulations. A port that wants to remain or become competitive at the local and international level should modify its physical structure and increase its capacity, but those environmental regulations are to be followed by any port, no matter if it is globally influential or what its function is. Whilst remaining so diverse in nature and function, the overall situation nowadays involving ports in the European region is well encompassed in a few lines in the statement below:

«The sector is facing major challenges in terms of hinterland congestion, traffic growth and investment. The EU needs good performing ports across all maritime regions. Bottlenecks in ports and their hinterland due to the lack of high quality infrastructure or low performing port services result in congestion and extra costs for shippers, transport operators and consumers.»¹¹⁴

¹¹³ ESPO Green Guide. *Towards excellence in port environmental management and sustainability*, Brussels, October 2012, p. 6

¹¹⁴ See: http://ec.europa.eu/transport/modes/maritime/ports/ports_en.htm (last accessed in October 2014)

All European maritime countries are facing the same kind of challenges, but the significant differences arisen between the North and the South of the continent lie in the way of dealing with the problem. On the one hand, ports that have promptly reacted to the major changes occurred in the field modifying and renovating their structure and infrastructural equipment have managed to reach very good economic performances. On the other hand, ports with limited physical possibility to expand or inadequate financial scope to operate material reforms to their structure are expected to be marginalized from the main commercial routes because of their proven inefficiency. The huge problem deriving from this structural gap is that non-performing ports undermine not only their adjoining region, but also the economy of the European Union as a whole.¹¹⁵ In other words, they put the brakes to the progress of the Northern Range port system as well, since, thinking about Europe as a coherent set of intermodal connections, the inefficiency of a single part of the network contributes to penalize the entire structure. As a consequence, the power of attraction of the European port sector is weakened by the scarce efficiency of the links between ports and freight final destinations in continental Europe. In fact, if a port located in an highly productive area has to distribute its incoming goods into a territory which is poor in adequate intermodal connections, the efficiency of the whole supply chain will thereby be at risk. According to the COM(2013)295, «*the absence of a fair level playing field ensuring consistency with the principles of the internal market in the port sector is at the core of the structural performance gap between ports*»¹¹⁶. Siim Kallas, the Vice-President of the European Commission and in charge of Transport, shares the same view when he talks about the proven lack of clear rules agreed at an European level, which «*in some cases prevents a fair competition environment*»¹¹⁷.

It goes without saying that this divide absolutely needs to be filled, through an European regulation which prescribes to national governments some interventions such as the improvement of the rail access to ports or the increase of their

¹¹⁵ EUROPEAN COMMISSION, *Ports: an engine for growth*, COM(2013)295 final, p. 4

¹¹⁶ Ibid., p. 5

¹¹⁷ EUROPEAN COMMISSION, S. Kallas, *A vital resource: Europe's ports face winds of change*, SPEECH/12/640, Conference on European ports policy, Brussels, 25 September 2012

connectivity with inland markets, so that Europe can operate as a single entity and not be seen as a multitude of actors in competition between each others. This hypothetical condition would be particularly beneficial to Mediterranean ports, since they are very often bypassed by Asian container ships that are preferably unloaded in Northern Range ports, despite the one-week-longer journey this solution implies. A common regulation of the European port sector could lead to the longed-for adjustment in the efficiency and quality of the service provision between the ports in the North and those in the South, so that also incoming traffic flows could be distributed in a more balanced way through the continent.

In the words of one of the most important European personalities, such as Siim Kallas, Europe hosts some of the best ports in the world, therefore there is a very good potential for all European maritime regions to grow economically and to improve their position in the global scenario, thanks to the high level of expertise of our operators.¹¹⁸ And talking about the challenges Europe has to face today, he stresses some of the points that require more attention:

«Our challenge is to promote best practices and a more entrepreneurial spirit in all of Europe's ports. An open business model that is based on fair competition, legal certainty and respect of the Single Market principles, is the pre-requisite for attracting private investments and creating job opportunities in the sector.»¹¹⁹

From this statement, it is clear what the European Commission expects from our ports. They have to become the primary engine of our social and economic development, in other words they have to provide the push for European growth. In other words, even if they are not the only architects of their own destiny anymore, they have still the responsibility to lay the foundation stones for being attractive at an international level. There are many options available to cope with the global changes of recent years, and ports have to start working on this from the awareness that doing nothing is not listed amongst the possible solutions. The majority of attempts made up to now in order to adopt a common port policy have failed mainly

¹¹⁸ EUROPEAN COMMISSION, *Ports 2030. Gateways for the trans European transport network*, foreword by Siim Kallas, October 2013, p. 1

¹¹⁹ *Ibid.*, foreword by Siim Kallas, p. 2

because of scarce coordination between involved actors and the lack of an overall vision of a plan for intervention. The approaches of decision makers to this issue have not been enough careful to the diversity between European ports and also too fragmented to be able to derive a series of common rules shared by all Member States. Therefore, despite there have been numerous attempts to reach an unanimous set of regulations, they have been regularly undermined by too slow reactions to the global changing situation and also by the often-present conflict between national policies and the call for the implementation of environmental measures.¹²⁰ During a visit to the port of Rotterdam in 2011, Siim Kallas did his remarks concerning this problem in the following terms: «*today, there is no EU legislation on the provision of port services. There is a patchwork of national regulations, with striking differences from one Member State to another*»¹²¹. The picture that emerges is worrying, to say the least. As a matter of fact, in a world in which Europe should strengthen its position to make its way against ever more powerful international competitors, national policies continue to prevail over an idea of the continent as a coherent entity. And, if the situation will not move away from this standstill, the role of Europe will be scaled down, notwithstanding the foreseen increase in traffic flows in the years to come. Without a common regulation, Europe risks to be a theatre of missed opportunities, and the disparities of performance between European ports will grow wider and wider. Besides, it will tend to rise also the divide of needs between the Northern Range ports, which have already intervened on their infrastructures and are therefore increasingly oriented towards the improvement of provided services, ICT and interoperability, and the Mediterranean, which is still focused on technical interventions such as the modernization of existing infrastructures or the building of new ones and the problem of the deepening of waters for welcoming ever bigger container ships. Despite the majority of attempts to come to a common port policy have been unsuccessful, they have surely contributed to the formation of a more European perspective on this issue, thing that will help any future development.¹²² Given that

¹²⁰ ESPO, *Una guida pratica per i decisori politici dell'Unione Europea*, 24 November 2004

¹²¹ Kallas S., *Memo on EU Ports Policy*, Rotterdam, 8 September 2011

¹²² Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012, p. 11

ports are fundamental nodes in freight distribution and trade in general, Europe should exploit their great potential to improve the position of the whole continent in the international scenario. Ports can be the key for European prosperity in the years to come, and they should be freer to act in conformity of their needs and possibilities, at least at the local level. Any initiative towards a greater cooperation between ports and a better integration between the port site and its adjoining hinterland should be encouraged by governments and European organizations, but not imposed on ports.¹²³ Port policies should be shaped by ports themselves and be the result of careful considerations about the needs and requirements of these structures, which obviously are diverse, as port functions and role in international trade are different.

2.2.2 The challenge of sustainability in ports development

«Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs»

(UN Brundtland Report, 1987)

Nowadays, ports are increasingly specialized gateways for the movement of freight and people, in which a wide variety of value-added services are provided. However, the environmental cost of port activities is becoming ever more significant in terms of emissions, noise and pollution in general. Metaphorically speaking, sustainability in port areas can be more easily referred to as a journey, rather than a final goal to achieve. As a matter of fact, the path to reach it is continuously evolving because the social and commercial backgrounds are constantly changing as well. Institutions and governments are increasingly careful to formulate approaches which keep pace with the ever more rigorous global environmental regulations. In this context, ports play a very important role because of their interest in promoting an intermodal transportation system having them as the main actors. Unfortunately, their great potential in shifting freight transportation from the by now-saturated road network,

¹²³ Ibid., p. 21

which increasingly more results in congestion and bottlenecks, to the more sustainable maritime transport modality has not been fully exploited yet. A significant example of how the environmental priorities in European ports evolve over time can be found in the figure below, which is the result of a survey research carried out in 2013 on a sample of 79 ports from 21 maritime countries in Europe. The figure provides a comparison between these latter results and those derived from three prior surveys that took place respectively in 1996, 2004 and 2009, outlining with the same colour the issues which continue to appear over time¹²⁴.

Air quality is currently found to be the most important concern of the European ports participating in the survey, and this says a lot about the importance accorded to environmental aspects related to the health and standard of living of people dealing with ports. It is no coincidence that the first ESPO detailed analysis of the attitude of European maritime countries towards issues that are still urgent today, such as the

	1996	2004	2009	2013
1	Port Development (water)	Garbage / Port waste	Noise	Air quality
2	Water quality	Dredging: operations	Air quality	Garbage/ Port waste
3	Dredging disposal	Dredging disposal	Garbage / Port waste	Energy Consumption
4	Dredging: operations	Dust	Dredging: operations	Noise
5	Dust	Noise	Dredging: disposal	Ship waste
6	Port Development (land)	Air quality	Relationship with local community	Relationship with local community
7	Contaminated land	Hazardous cargo	Energy consumption	Dredging: operations
8	Habitat loss / degradation	Bunkering	Dust	Dust
9	Traffic volume	Port Development (land)	Port Development (water)	Port development (land)
10	Industrial effluent	Ship discharge (bilge)	Port Development (land)	Water quality

Figure 5: Evolution of environmental priorities over time (1996-2013). Source: ESPO / EcoPorts Top environmental priorities of European Ports for 2013, Brussels, December 2013, p. 2

energetic efficiency in ports and their reaction to the problem of climate change, has been presented precisely in 2009. The ESPO / EcoPorts environmental review of that year, in fact, provided the outcomes of their survey research in percentages, thing that clearly denotes not only the will of keeping those environmental concerns

¹²⁴ ESPO / EcoPorts Top environmental priorities of European Ports for 2013. An analysis taking port size and geography into consideration, Brussels, December 2013, p. 1-2

amongst the priorities on the European political agenda, but also the intention to serve as the basis for future improvement.

Another relevant aspect involves energy consumption and the establishment of a relationship with the local community, that are the two issues which entered the list of the environmental priorities in 2009. The fact that, five years on, both continue to be among the ten priorities for the European ports sector clearly reflects the commitment of European governments and institutions to the environmental cause. Moreover, while the instauration of good port-city relations aimed at a better integration of the port within the local territory has maintained its rank in the list, more attention has been drawn to the issue related to energy consumption, which has ranked third in 2013. Apparently, saving energy is still among the major concerns of the European ports sector, to the extent that, according to data collected by ESPO in 2009, 57% of 122 ports participating in the survey had a plan to increase energy efficiency and 20% of them was already producing some form of renewable energy.¹²⁵ Therefore, what can be recorded thanks to these reports issued by ESPO and EcoPorts is a consistent change in the ranking of port environmental priorities from 1996 to 2013, but it is worth noticing that some components maintain their paramount importance in the path towards a further sustainability in port activities.¹²⁶ The close collaboration between port authorities and the operators involved in port activities is proven to be essential for port development, as is the mechanism of self-monitoring and the self-assessment of the environmental performance of the port. At this regard, from 1996 to 2013 it has been registered a consistent progress achieved by ports in formulating a proper environmental policy and in publishing environmental reports on an annual basis.¹²⁷

In order to help ports in their approach to sustainability, in 2012 ESPO launched its *Green Guide: towards excellence in port environmental management and*

¹²⁵ ESPO / EcoPorts Port Environmental Review 2009. European Sea Ports Organisation, s Review of Environmental Benchmark Performance in collaboration with the EcoPorts Foundation (EPF), Brussels, February 2010, p. 7

¹²⁶ ESPO / EcoPorts Top environmental priorities of European Ports for 2013. An analysis taking port size and geography into consideration, Brussels, December 2013, p. 2

¹²⁷ ESPO / EcoPorts Port Environmental Review 2009. European Sea Ports Organisation, s Review of Environmental Benchmark Performance in collaboration with the EcoPorts Foundation (EPF), Brussels, February 2010, p. 8

sustainability, which replaced the prior ESPO Environmental Code of Practice, produced in 2003. Making a step further with respect to the previous editions, this guide encourages ports not only to improve their environmental performance, but also to self-evaluate their own already achieved results. This aspect perfectly fits in ESPO policy vision of pushing ports towards a voluntary self-regulation of already implemented progresses and the report of their efforts and successes.¹²⁸ Of course, such an approach is extremely useful not only to the port itself, that manages to be constantly aware of the quality of its performance and what will be the next step towards a further amelioration, but also to other ports that are in the same condition and want to improve their environmental responsibility level. In the words of ESPO Chairman Victor Schoenmakers: «I am confident that the ambitious goals of the Green Guide will encourage our members to further improve their track record in environmental management and performance.»¹²⁹ In the view of ESPO, the action of ports aiming at a more sustainable approach to intermodal freight transportation should be shaped by the *Five Es*: Exemplify, Enable, Encourage, Engage and Enforce. This systematic framework is to be applied to the five selected environmental issues of air quality, energy conservation and climate change, noise management, waste management and water management.¹³⁰ Ports, therefore, have to focus on setting an example of positive environmental performance for the port community creating the necessary conditions for the ecological improvement of the port and encouraging a change in the behavior of port users. Naturally, the fact of sharing knowledge about the experience of each port is useful to help the success of common projects aimed at improving sustainability within the supply chain, even if the most challenging responsibility of ports is to enforce a good environmental practice. Basically, while the increase of productivity and the structural adaptation of ports to the ever more demanding customers can be a choice, the fact of following environmental regulation and the respect for the territory adjoining the port is a must. However, every port faces its own environmental challenges, given that each one presents its own physical structure, characteristics and willingness to change.

¹²⁸ *ESPO Green Guide. Towards excellence in port environmental management and sustainability*, Brussels, October 2012, p. 7

¹²⁹ *Ibid.*, introduction by V. Schoenmakers, p. 5

¹³⁰ *Ibid.*, p. 7

Therefore, the aim of any report on the environmental performance of ports is to provide some indicative guidelines to help ports in their path towards sustainability, not to formulate a model for action that fits all port authorities at the same time.

Notwithstanding the existing differences between ports in terms of internal features and external approaches to the changing situation, there are a series of goals that every port is called to reach. To this latter category belongs the absolute necessity to minimize the negative environmental impact that ports have on the adjoining territory and on the standards of life of people that live in port areas or are involved in port activities. A profitable way to achieve this result is the employment of renewable sources of energy and clean fuels for transport, initiative that, however, will make sense only if accompanied by the build-up of alternative refueling points all across Europe. According to a press release by the European Commission, new EU rules about this environmental priority have been given the final approval on April 2014 and last September have been eventually adopted. The major aim of these new regulations is to be the starting point for a widespread use of clean fuels all over the continent, thing that obviously requires a common framework to allow a EU-wide mobility both for freight and for passengers.¹³¹ Of course, this has to be only the first step towards a more tangible eco-friendly European policy for the use of more sustainable transportation modes. Moreover, in order to be successful, the strategy underlying this goal must be common and shared by all the European Member States, which have the responsibility to publicly present their intentions and plans for a national policy on this issue by end-2016. So far, the absence of a common regulation concerning alternative fuels and the lack of harmonization on fuel taxes have been an obstacle to the achievement of a joint strategy for a more sustainable approach to the transportation field. With a view to the limitation of negative impacts of transportation on the environment, the European Commission encourages the greater employment of alternative fuels also providing for tax exemption or reduction for vehicles using them. This is surely the right direction to follow, but Europe needs to do more for a concrete common environmental policy

¹³¹ EUROPEAN COMMISSION, *Clean fuels for transport: Member States now obliged to ensure minimum coverage of refueling points for EU-wide mobility*, IP/14/1053, Brussels, 29 September 2014

and for a greater harmonization of both transportation costs, which are very different from one country to another, and intermodal connections, which are still undermined by a huge infrastructural and efficiency gap between countries belonging to the same geographical area.

A few words by the European commissioner for transport, Siim Kallas, encompass the great potential offered by the development of a useful environmental policy: *«alternative fuels are key to improving the security of energy supply, reducing the impact of transport on the environment and boosting EU competitiveness»*¹³². It is clear, therefore, that, beyond the ecological component, the importance of establishing a good environmental policy with regard to the transportation field is both political and economical. As a matter of fact, a country which is interested in protecting the environment, and in the formulation of a consistent policy for the conservation of it, presents more probabilities to be chosen as a partner by international operators, because it very often presents also modern infrastructures and cutting-edge mechanisms that reduce the scheduled time for port operations. This takes the form of a vicious circle, as an already efficient port is obviously more competitive than an inefficient one, and manages to attract more traffic flows, but isolated ports that have lost their international appeal find it more difficult to become competitive without being involved in commercial route because they lack the means and the know-how to do that. Actually, the fact of being part of the main commercial routes is the key to become competitive, since the risk of being excluded provides the right push towards a more conscious adaptability to the global change and towards the development of a proper environmental policy.

Unfortunately, the projects for the adoption of clean fuels have been obstructed by a series of factors such as the high initial cost of alternative fuels vehicles, the inadequacy of recharging or refueling points for their use and the scarce level of information that has been given to customers about the environmental convenience of this kind of engines.¹³³ Basically, the Member States of the European Union have not been coordinated in the divulgation of clear information about the great

¹³² Ibid.

¹³³ Ibid.

potential of green fuels in the respect of the environment and about the importance of inserting this issue into national environmental policies. With the final approval of the new EU rules concerning ports in April 2014, Europe has demonstrated its will to change the situation, introducing the protection of the environment on the top of its political agenda and suggesting some possible technological innovations that will help minimizing the negative externalities of transport. After the approval of the regulation for the environmental management of ports, Siim Kallas did his remarks in the following terms:

«This is a major innovation and a milestone in the roll-out of clean fuels in Europe. These new rules are a direct response to calls for a clear framework to set the future direction for clean fuels in Europe, to end uncertainty and allow investments to follow. This vote sends a clear signal that Europe is putting clean fuels at the heart of its transport policy, and the drive to develop a transport system fit for the 21st century.»¹³⁴

The main measures involved in the European agreement concern infrastructures and information. It has been set a minimum level of infrastructures that is to be included in all Member States plans for innovation and it has been agreed an European standard to which these new infrastructures will have to be adapted, so that EU-wide mobility of users is made easier. Each Member State, therefore, is called to provide facilities for the use of alternative fuels, such as refuelling and recharging points, in order to ensure a kind of continuity of transportation all over Europe. Furthermore, they are asked to give customers clear information about the use of alternative fuels, so that they are put in the condition of understanding the environmental advantages offered by clean fuels, also providing a comparison with conventional fuels, both in terms of externalities and prices.¹³⁵ In other words, given that to preserve mobility is an essential point for European economical prosperity, the reduction of its negative impact on the environment must be treated as a priority involving all Member States.

¹³⁴ EUROPEAN COMMISSION, *European Parliament vote "milestone" in the roll out of clean fuels for transport*, IP/14/440, Brussels, 15 April 2014

¹³⁵ Ibid.

2.2.3 Funds for port modernization

As has already been said, ports have the great potential, unfortunately largely underestimated and unexploited, of acting as engines for economic growth both at the European and international level. However, this does not practically apply to all ports, since only those that over years have intervened in their physical and managerial structure in order to adapt to the changing global situation, now find themselves involved in the main international commercial routes. Of course, the series of interventions that ports have faced in order to keep up with all the changes occurred in the framework of the international trade have needed a consistent amount of money to be implemented. This is where the problem of financing ports innovations and reforms comes in.

The existing gap in efficiency and productivity between Northern Range ports and Mediterranean ports can be justified also in terms of some differences in port governance and management. In a proposal issued by the European Commission in mid-2013, there is a call for an extension of *«the freedom of ports to levy infrastructure charges and [to] reinforce the transparency in the way the charge are set and in the use of public funding»*¹³⁶ which clearly demonstrates how a greater independence of ports from the State could bring them to play a more important role in the international scenario. Firstly, the decision of ports of offering more transparency concerning the management of public funds could help them in the attraction of private investors, and secondly, in view of a greater sustainability of port operations, ports could decide to reduce charges for ships showing a good environmental performance.¹³⁷ Port Authorities have to be ready for their necessary contribution to a greener environment, an aspect which will become increasingly relevant in the years to come. Ports have to act today to be prepared for the challenges of tomorrow, but they need huge investments to adapt to the current commercial situation. It is here that lies the importance of an independent-from-the-State financial and structural management of the port, in which each Port Authority

¹³⁶ EUROPEAN COMMISSION, *Commission proposes upgrade for 300 key seaports*, IP/13/451, Brussels, 23 May 2013

¹³⁷ Ibid.

is free to act in the interests of the specific port it is representing, and this is fundamental in a system in which ports are so diverse between them. The long-term stability and the transparency about how public funds are spent will give greater certainty to any possible investor, that will be more encouraged to put money in a given port system. According to the level of dependency of the port from the state, these decision can be the responsibility of each Port Authority, therefore, the less Port Authorities are subject to the State, the more they have the possibility to make individual decisions targeted on the specific needs of a given port. With regard to port infrastructures charges, the Regulation accompanying COM(2013)295 «introduces a degree of autonomy enabling Port Authorities to establish the structure and level of port dues according to their own commercial and investment strategy»¹³⁸, which is one of the prerogatives for the international success of ports. Of course, there has to be a sort of equilibrium between ports on the matter of charges, since the fact that some apply a single tariff comprehensive of all services while others apply a separate tariff for each service is surely confusing. Similarly to European funds, also port charges need to be imposed following a transparent and non-discriminatory approach, without advantaging or penalizing customers unreasonably.¹³⁹

According to a document issued by the European Commission in 2013, EUR 26 billion have been allocated by Europe for the improvement and the upgrade of the transportation infrastructures in the next six-year period from 2014 to 2020.¹⁴⁰ A great deal of that money will be earmarked for the priority projects that will allow the proper functioning of the nine trans-European corridors, scheduled in order to increase the connectivity of the European network and facilitate freight distribution all over the continent. Of course, this evolution in EU-wide transportation will not be possible without the accomplishment of a series of technological innovations that will make easier the integration of each port into its adjoining territory and into the main commercial and distribution routes. Every investment in that direction will be

¹³⁸ EUROPEAN COMMISSION, *Ports: an engine for growth*, COM(2013)295 final, p. 13

¹³⁹ EUROPEAN COMMISSION, SPEECH/12/640, S. Kallas, *A vital resource: Europe's ports face winds of change*, Conference on European ports policy, Brussels, 25 September 2012

¹⁴⁰ EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell'UE*, MEMO/13/897, Brussels, 17 October 2013

aimed at the satisfaction of European standards, the conformity to which will be increasingly monitored by the central authority. The projects that will first benefit from the European funds are those with the highest value added for the European Union as a whole. In order to ensure that the allocated funds are used for the real priority projects for connecting Europe, an ever stricter mechanism for the assessment on work in progress will be put in place. Member States will be asked to provide periodic reports explaining the already achieved results and the next steps to take, so that the European Commission is always informed about the progresses or standstills of the projects it is financing. Given that transportation infrastructures need huge investments, the EUR 26 billion allocated for this purpose are to be considered as a start-up capital with a double function. While on the one hand, in fact, that sum is to be used by Member States for the first steps in the modernization of European infrastructural equipment, on the other hand, the allocation of that money has the function of acting as a lever for further desirable investments coming from the Member States as such.¹⁴¹ It has been estimated, in fact, that EUR 250 billion is the total sum that will be needed for the first stage of the construction of the European core network, which corresponds to the period 2014-2020. During this phase, the European Commission and the Member States foresee to implement only the priority projects in the field of transportation and sustainability.¹⁴² The majority of funds will always come from the individual states, so it is clear how the role of the European Commission is somewhat limited to the provision of the necessary push for action to Member States and of the support in the coordination of their efforts towards the achievement of a single European market characterized by a better connectivity. In the words of Siim Kallas, «*to cope with the rising demand, ports will need adequate financing – public and private – as will other parts of Europe’s transport infrastructure.*»¹⁴³ Again, ports need huge economic investments that serve as the means in absence of which infrastructural renovation is not possible, but in order to be eligible for receiving public funds they either have to be located in an

¹⁴¹ Ibid.

¹⁴² EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell’UE*, MEMO/13/897, Brussels, 17 October 2013

¹⁴³ EUROPEAN COMMISSION, SPEECH/12/352, S. Kallas, *Steering a course for the future: Europe’s ports in the 21st century*, European Sea Ports Conference, Sopot, 11 May 2012

essential point of the core network or have demonstrated their willingness to change, usually through already achieved result in this field, that act as the basis for further interventions.

Another case in which the intervention of the European Commission is desirable is, for instance, the realization of missing cross-border connections, that otherwise would result particularly difficult, or not being fulfilled at all. However, up to now, the assignment of European funds has been undermined by a scarce level of coordination between operators and the lack of clear regulations determining which projects should have had the priority of realization. The last proposal by the European Commission for the 2014-2020 Financial Framework was presented in June 2011, and, according to the regulation introducing the CEF (Connecting Europe Facility), a port is eligible for receiving public funds if it is located in the core network or in a position that would link a port to the core network.¹⁴⁴ Some priority projects are, for example, those concerning the accessibility to port structures and the quality of hinterland connections as, no need to say, the more a port offers efficient inland links for freight distribution, the more it will attract traffic flows and it will be given further economic support for the realization of other ad hoc projects. Moreover, another point is the necessary internalization of external costs into the infrastructure charges that any user is asked to pay in order to use port infrastructures and receive port services. This self-financing option enables ports to have a financial return by customers for the use of port facilities, and this is fundamental for the realization of further projects related to the port area without having to apply for public funds that are so difficult to obtain. The constant renovation of the port through the most up-to-date technologies in the port field is closely linked to the internalization of costs into the infrastructure charges. On the one hand, in fact, a user who is supposed to pay costly charges expects an high-quality service in return, while, on the other hand, the efficiency of ports is heavily dependent on the entity of funds invested in new infrastructures for port modernization.

Although traditionally mobility infrastructures have been built thanks to a system of public funding, nowadays it need to be complemented by additional money coming

¹⁴⁴ EUROPEAN COMMISSION, *Ports: an engine for growth*, COM(2013)295 final, p. 8

from other sources. Funds allocated at the regional and national level and by the European Commission are not sufficient for the realization of the totality of projects that Europe need in order to increase its inland connectivity and remain competitive in the international scenario. Because of this lack of funds, some projects are selected ahead of others, giving the priority to cross-borders connections and proposals which present an high value added for the core network as a whole. The aim of public institutions is to provide a limited contribution to the total cost in order to incentivize some forms of public-private partnerships and facilitate innovative financial mechanisms.¹⁴⁵ The European Commission encourages the involvement of private capitals in infrastructures funding, but private investors have to face the big concern of the great uncertainty about the financial returns, which often come only once the project becomes operational. However, with a greater development of public-private partnerships that mechanism will change, as the majority of the risk is borne by the State, and investors are surely more attracted in a kind of investments which guarantee, in any case, a sort of financial return.¹⁴⁶ The shortage of financial resources, due to the current difficult economic situation in Europe, puts at risk the essential interventions needed for the expansion of the transportation infrastructure. For this reason, a greater participation of the private sector in ports modernization would be a way to overcome the problem, since it would put European ports in the position of becoming competitive in terms of services provided and efficiency level. Furthermore, private investors such as shipping companies find it extremely worthwhile to put some capitals in port industries, as this partial control over terminals allow them to benefit from lower infrastructure charges, faster accomplishment of port operations, and consequently the reduction of total transit time at the port.¹⁴⁷ This interest shown by international operators in taking part in the management of foreign ports is a demonstration of their will to make investments with the guarantee of an economic return and of the importance granted to the constant monitoring of the key nodes of the transportation chain.

¹⁴⁵ EUROPEAN COMMISSION, *White Paper. European Transport Policy for 2010: time to decide*, 2001, p. 59

¹⁴⁶ *Ibid.*

¹⁴⁷ Foschi Alga D., *The maritime container transport structure in the Mediterranean and Italy*, Discussion Papers del Dipartimento di Scienze Economiche – Università di Pisa, n.24, 2003, p. 21

CHAPTER III

NEW OPPORTUNITIES FOR THE MEDITERRANEAN

3.1 THE RENEWED INTERNATIONAL INTEREST IN THE MEDITERRANEAN SEA

3.1.1 The key role of the Mediterranean in UE-East trade relations

During the early 1990s, the Mediterranean sea has regained strategic importance for the international political and economic context, despite its organizational inefficiency and a too slow reaction to the change of the paradigms of international port activity occurred in that period. As pointed out by Ridolfi, the nature of this geographic area has consistently changed over years, going from being a space for mere regional commercial exchanges to the wider dimension of becoming one of the main nodes in the trade routes of the globalization.¹⁴⁸ The Mediterranean, therefore, has been given the opportunity of becoming a main actor in the international scene when big ships, particularly those coming from the East, started to call in the ports of the region instead of considering it only as a transit area as it used to happen before. The value added of ports facing the Mediterranean has notably increased, even if their appeal and competitiveness have always been lower if compared to Northern Range ports, without a doubt a better organized and more efficient system, characterized by an higher connectivity and a greater possibility to expand port spaces.

There are several reasons for which the Mediterranean sea has regained importance in the international scene in the last couple of decades. Amongst them, there is the striking development underwent by the Far East between the end of the 1980s and the beginning of the 1990s, which has recalled to the surface the issue of the commercial accessibility to European countries. The Mediterranean, de facto, is

¹⁴⁸ Ridolfi G., *Rotte oceaniche e servizi feeder. Il nuovo ruolo del Mediterraneo*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 93

located in a much more favorable position than the ports facing the Atlantic ocean, but it has lost part of this geographical advantage because of its logistical inefficiency and poor services provision. The growth of Asiatic markets has caused both an expansion in the global economy and a shift in commercial routes, affecting the general evolution of traffic flows and determining the adoption of new logistical strategies in the transportation field.¹⁴⁹ Due both to the economic boom witnessed by Asian developing countries and to the ever more widespread outsourcing trend of Western activities in these areas, which has been encouraged by the low cost of labour force and the high productivity, the growth of Asian economy has brought some major changes in world commercial exchanges. After the reopening of the Suez Canal in 1975, the Mediterranean definitely regained its role as geo-political and geo-economic focal point for international trade routes. The following size adaptation of the Canal to the increasing volumes of traffic flows from the Far East and, not least, the increase in fuels prices has made this passage the most convenient for the distribution of goods into the Mediterranean¹⁵⁰. Of course, this second feature is closely related to the above mentioned emergence of new Eastern powerful economies on the international stage, as, following the growing amount of container ships coming from the East, the strategic role of the Suez Canal has become ever more relevant. After the end of works for its enlargement in 2010, container ships and tankers carrying up to 250.000 tons can now transit through the Canal to reach the Mediterranean countries, actually reducing consistently the time at sea.¹⁵¹ Notwithstanding the crisis which has been involving the world economy in recent years, the volume of traffic flows passing through the Suez Canal are expected to grow further in the long-period. According to the Ocean Shipping Consultants Ltd, in fact, by 2015 the handling of containers in Mediterranean ports will rise of 90% if compared to the value recorder in 2009.¹⁵² It goes without saying that this projection will verify only for those ports that will understand the great potential of the Suez

¹⁴⁹ Ibid., p. 96

¹⁵⁰ Mariano G., *Il mare italiano*, in *Gli imperi del mare*, LIMES – rivista italiana di geopolitica – n. 4, 2006, pp. 207-216, p. 209

¹⁵¹ Ruggiero L., *Il ruolo strategico del Canale di Suez e le prospettive della portualità mediterranea*, in *Geotema – Porti, trasporti marittimi, città portuali – year XIV, January-April 2010*, Pàtron Editore, p. 52

¹⁵² Ibid., p. 56

Canal for the Mediterranean commercial prosperity, taking this opportunity to improve their infrastructures and inland connections. The growth in the Suez Canal transit capacity is at the same time the answer to the unstoppable rise of traffic flows at the international level and the cause of the shift of the axis of freight transportation flows from the Atlantic side to the Mediterranean sea.

A third aspect determining the renewed importance of the Mediterranean in the global scenario is to be attributed to the strategies of international transport operators, which takes the form of an interest in the direct control and management of port terminals. The investments of foreign actors in several Mediterranean ports have positively affected the expansion of port sites and, consequently, have contributed to the increase of their global competitiveness, even if the highest level of efficiency and reliability in Europe still belongs to the Northern Range system.¹⁵³ Many international shipping companies, therefore, have set a series of benchmark hubs in the Mediterranean sea to address their freight cargos and benefit from the use of port facilities and the advantages deriving from these commercial alliances. These strategic partnerships between ports and international liners have been welcomed by Mediterranean port authorities, that have seen them as a tactic to stay in the European game, increasing the volume of container traffic flows in their ports and limiting the uncertainty involving them in the view of foreign investors.

The standardization of cargos has made easier for international transport operators to optimize as much as possible the efficiency of the supply chain as a whole, for instance by increasing the size of container ships so that it becomes possible to move a greater amount of goods in the same transportation unit. The figure below shows the evolution of container ships in terms of dimensions, which can be easily divided into development generations, on the base of the number of TEU a ship carries on board, where *TEU (Twenty Foot Equivalent Unit) is the unit of the capacity of a container ship, a container terminal and the statistics of the container transit in a port*¹⁵⁴. Basically, this unit of measurement is equivalent to the effective volume occupied by an ISO container, and it is the most used when talking about the

¹⁵³ Ibid., p. 60

¹⁵⁴ See: <http://www.logisticsglossary.com/term/teu/> (last accessed in November 2014)

phenomenon of ship gigantism. Usually, the evolution of ships size is articulated in six generations, that helps understanding the technological and capacity progresses achieved by port terminals over years, but it is worth noticing how ships belonging to different generations coexist and are deployed on different routes, depending on the function of ships and the requirements of the routes involved in the service. As shown by the figure, the real watershed in the increase of the size of ships is to be found between the third and the fourth generation, when the operational limitation posed by the physical capacity of the Panama Canal is definitively overcome. The transition from the *Panamax* to the *Post Panamax* ships is particularly important because it is among the factors which has contributed to re-launch the centrality of the Mediterranean sea into the main international trade routes. In fact, when shipping companies have been denied the transit through the Panama Canal because of the excessive dimension of container ships they were employing for freight transportation, the consequence has been the revaluation of the Suez Canal as an alternative transit option, much closer to the European continental markets and with a greater possibility of further expansion.

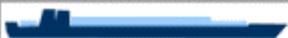
		Length	Draft	TEU
First (1956-1970)	 Converted Cargo Vessel	135 m	< 9 m < 30 ft	500
	 Converted Tanker	200 m	< 30 ft	800
Second (1970-1980)	 Cellular Containership	215 m	10 m 33 ft	1,000 – 2,500
Third (1980-1988)	 Panamax Class	250 m	11-12 m 36-40 ft	3,000
	 Panamax Class	290 m	36-40 ft	4,000
Fourth (1988-2000)	 Post Panamax	275 – 305 m	11-13 m 36-43 ft	4,000 – 5,000
Fifth (2000-2005)	 Post Panamax Plus	335 m	13-14 m 43-46 ft	5,000 – 8,000
Sixth (2006-)	 New Panamax	397 m	15.5 m 50 ft	11,000 – 14,500

Figure 6: Evolution of container ships in terms of dimension

(source: <http://www.container-transportation.com/container-ships.html>)

Besides the ever increasing dimension of container ships, the necessity to reduce time and costs of the transportation chain is reflected also in the attempts to decrease journey-time and transit-time at the port, as a ship during navigation is more productive than a ship standing at the port. With this in mind, shipping companies prefer relying on less ports but that are more efficient in terms of infrastructures provision, accessibility and connectivity with the hinterland, which are all aspects that help a smooth freight distribution from the port to inland final destinations. Actually, it is here that lies the success gained by the transshipment modality, which has been spreading since the early 1990s in the Northern Range ports system, and more recently has been introduced also in the Mediterranean, reporting, however, considerable success.¹⁵⁵ This mechanism, foreseeing a limited number of calls only at the major ports, from which a dense network of feeder services addressed to minor ports is originated, presents a double advantage for big container ships. Firstly, in fact, it makes the freight distribution service faster because of the notable reduction of calls that each ship is supposed to realize, and, secondly, it envisages the dramatic increase in the size of container ships that are no longer supposed to reach minor ports and, therefore, have wider spaces for manoeuvre at disposition. Hub ports and their corresponding feeder ports take the form of a network structure in which several minor points refer to a single major point establishing connections with it and not between each others, as it happens in a system shaped by a multitude of independent connections.

¹⁵⁵ Ridolfi G., *Rotte oceaniche e servizi feeder. Il nuovo ruolo del Mediterraneo*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002, p. 100

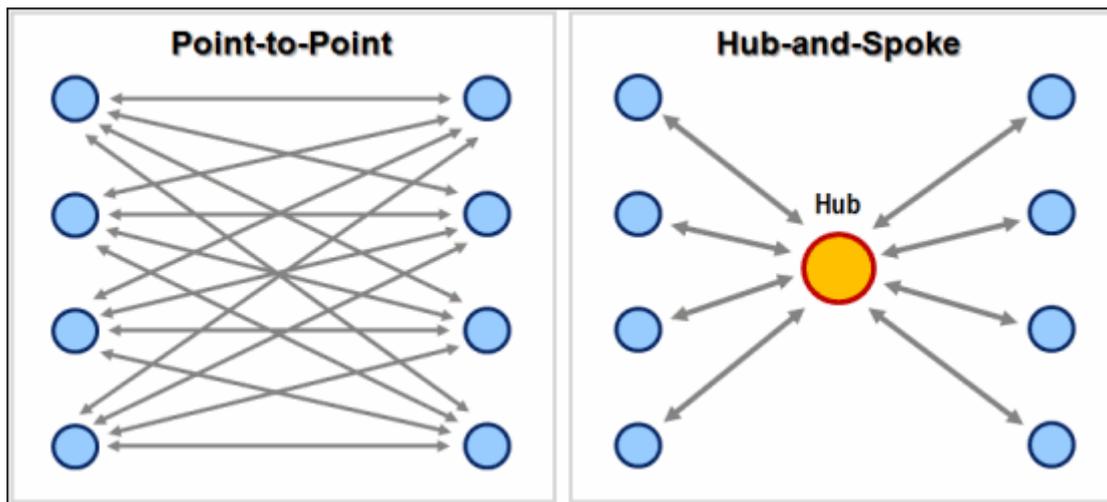


Figure 7: Structural difference between point-to-point and hub-and-spoke networks (source: Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006, p. 48)

As observed by Ridolfi, the diffusion of containers and the emergence of the *hub and spoke* system in the Mediterranean have been at the same time cause and effect of the integration of this geographical area into the main international trade routes.¹⁵⁶ Many of the ports that today act as pure transshipment hubs have been initially encouraged to approach the *hub and spoke* modality by the changes occurred in the structure and organization of international shipping liners, and have then continued to focus on this function for their future development. Generally speaking, this kind of ports are «located on the shortest route that allows the least waste of time for the great ocean-going container liners»¹⁵⁷. They are usually characterized by poor hinterlands or difficult inland connections, which makes it impossible for them to receive goods and distribute them directly to final destinations. Therefore, even if the transshipment option may seem a forced choice for some ports, its success in the Mediterranean is witnessed by the high percentage of freight that are moved every year through the *hub and spoke* transportation modality. The growing role of transshipment together with the increase of containerized traffic flows reaching the Mediterranean through the Suez Canal, has largely contributed to the modernization of infrastructures and managerial organization in the ports belonging to this area.

¹⁵⁶ Ibid., p. 101

¹⁵⁷ Cazzaniga Francesetti D. and Foschi Alga D., Shipping companies strategies and Mediterranean ports competitiveness, July 3, 2001, p. 8

The fact that transshipment is more widespread in the Mediterranean than in Northern Europe is a clear evidence of the serious infrastructural inadequacy of Southern European maritime countries that, lacking an efficient network of connections with the hinterland, focus on operations that take place within the port, that is unloading big container ships in order to load cargo on feeder vessels. Mediterranean ports have found themselves involved in the main East-West commercial routes and have reacted to this shift in traffic flows global direction with the *hub and spoke* system, a modality which has helped them to dissemble an undeniable weakness of the land-side intermodal connections and the non-integration of inland nodes into an efficient transportation network. This approach has largely contributed to the re-launch of Mediterranean ports, allowing the basin not to lose the opportunity of a new centrality in world trade. Obviously, over years this change in the attitude of Mediterranean ports has implied huge physical transformations and structural adjustments, to the point that port sites without modern infrastructures, adequate depth of channels and basins and appropriate length of quays are seriously penalized.

Thanks to its strategic geographical position at the heart of international commercial exchanges, the Mediterranean sea takes the form of an arena in which the increasing interests of global players are focused and competing forces driven by international actors are concentrated. The condition of local agents is too weak to take a firm position in this scenario, so the influence of international operators tends to prevail over the local involvement in the area. Notwithstanding the increasing importance of the Mediterranean at the international level, this region results as highly fragmented and unable to formulate a common port policy that establishes the rules of the game to which any external force should adapt. Apparently, ports facing the Mediterranean basin seem incapable to exploit their great potential in being the engine for the development of Southern Europe and the competitive advantage deriving from their favorable geographical position. Unfortunately, instead of creating an unanimous plan that would assign to each Mediterranean port its function, taking into consideration the needs and peculiarities of every port structure, in the basin it prevails a sort of competition between ports belonging to

the same area and intercepting the same traffic routes. The reason for this is the lack of specialization of Mediterranean ports that, after the great success of the transshipment modality and willing to acquire a pivotal role in the economy of the basin, have gone through very similar processes of modernization in order to reach the necessary standards to welcome ever bigger container ships. The risk, which has been pointed out also by Ridolfi, is an overbidding of ports if compared to the volumes of traffic flows, albeit the latter are expected to increase steadily.¹⁵⁸ Not all ports that have undertaken ambitious plans for the modernization of their own terminals, therefore, will then be satisfied by the growth of commercial flows largely due to the amazing development of emerging Eastern economies. As it is easy to imagine, the outcome of this situation takes the form of a struggle for existence, as Ridolfi defines it¹⁵⁹, since a narrow space such as the Mediterranean basin can count only a limited number of transshipment hubs. The main concern of the governments and policy makers of the Mediterranean countries, therefore, should now be to prevent this basin from becoming only a mere space of transit for the huge amount of freights coming from the Far East. Thus, in order to prevent this to happen, all the countries facing this maritime space should implement innovative strategies and develop new initiatives in the field of sea management.¹⁶⁰

¹⁵⁸ Ibid., p. 104

¹⁵⁹ Ibid., p. 105

¹⁶⁰ Buono F. and Soriani S., *Mare/Sea*, in Giaccaria P., Paradiso M., *Mediterranean Lexicon, Lessico Mediterraneo*. Società Geografica Italiana, Roma, 2012, p. 165

3.1.2 The TEN-T program in the Mediterranean: a European strategy

The TEN-T Program (Trans-European Transport Network) issued by the European Commission is a project which aims at the creation of a comprehensive network for intermodal transportation, involving all modes of transport. In the words of Siim Kallas, European Commissioner for Transport until the last November, the idea of organizing the existing connections in a proper functioning system that will provide the cohesion that the European continent needs is fundamental for any future development:

«Transport is vital to the European economy. Without good connections Europe will not grow or prosper. This new EU infrastructure policy will put in place a powerful European transport network across 28 Member States to promote growth and competitiveness. It will connect East with West and replace today's transport patchwork with a network that is genuinely European.»¹⁶¹

Such calls for the improvement of the connectivity in Europe have been present for many years now among the top priorities on the agenda of the European Commission. Similarly, this awareness of the relevance that the transportation sector has for both the economic development and the competitiveness of European markets has been the common thread of policy measures and of many speeches made by influential personalities in the field. In this regard, in fact, it is interesting to compare the above quoted words pronounced by Siim Kallas in 2013 with a speech made in 2006 by the former European Commissioner for Transport, Jacques Barrot:

«Mobility is essential for free movement of European citizens and economic growth. [...] We need to step up our efforts to make road transport and aviation more efficient and greener. That is why I want to focus on logistics, green propulsion and intelligent transport systems which use the latest technologies»¹⁶²

¹⁶¹ EUROPEAN COMMISSION, *Transport: new EU infrastructure policy*, IP/13/948, Brussels, 17 October 2013

¹⁶² EUROPEAN COMMISSION, *Keep Europe moving: a transport policy for sustainable mobility*, IP/06/818, Brussels, 22 June 2006

Both of them stress the prominent role of the transportation sector for the relaunch of the European economy and the urgent need to implement measures in this direction not to be excluded from international trade routes. Even if they focus on different solutions, with the passage of time the problem has remained the same, and the realization of an efficient network for mobility together with the desirable presence of an high level of integration between European countries and between different modes of transport is still more relevant than ever.

With regard to the origins of the TEN-T Program, the first action plans for its implementation were adopted by the European Commission in 1990, when the framework for the realization of new infrastructures helping European cohesion and an easier freight distribution throughout the continent was set. From this moment onwards, there has been an escalation in the interest towards the TEN-T Program and all the benefits that would have derived from a more coherent infrastructural policy and a greater coordination between Member States with regard to this field. Some examples of the growing attention towards this issue are the inclusion in the 1992 Maastricht Treaty of a legal basis for TEN-T and the creation of a list formed by 14 priority projects concerning European mobility during the Essen European Council in 1994¹⁶³. The series of Guidelines defining the TEN-T policy that was adopted in 1996 was then modified in 2004, when the list of 14 priority projects was expanded following the enlargement of the European Union and the consequent extension of connectivity projects also to the new Member States. The TEN-T Guidelines were extended to port infrastructures only at a later stage, in 2001, when also seaports, inland ports and waterways were introduced into an even more comprehensive intermodal transportation network, laying the foundations for the later introduction of the Motorways of the Sea project in 2004. From that moment onwards, all the main modes of transport were included in this program, that has become one of the key elements shaping the strategy towards the achievement of European objectives in the transportation and environmental sector.

¹⁶³ EUROPEAN COMMISSION, Proposal for a *regulation of the European parliament and of the council on Union guidelines for the development of the Trans-European Transport Network*, COM(2011)650 final, p. 2

Following the further extension of Europe to new territories and the notable increase in traffic flows involving the continent in recent years, that was due to the globalization in trade relations and the impressive development of Eastern economies, the problem of connectivity has become an even more real concern. The primary need is to plan a serious set of interventions in order to convert the current maze of streets, railways and inland waterways in a coherent system for smooth intermodal transportation. One of the most recent and significant revisions of the European infrastructure policy in that direction date back to the late-2013, when the Commission proposed a new project based on a core network shaped by nine main corridors. As illustrated by figure 8, this connectivity structure will be constituted by two vertical North-South corridors, three horizontal East-West corridors and four diagonal corridors, each of which is supposed to involve at least three different modes of transport, three Member States and two cross-border connections.¹⁶⁴ Moreover, the project foresees a comprehensive network to be linked to this backbone of principal transport routes, which will ensure a more capillary coverage of all Member States, but at a regional level. Basically, the aim of this policy is to make Europe smaller and more connected, ensuring in this way that *«progressively, and by 2050, the great majority of Europe's citizens and businesses will be no more than 30 minutes' travel time from this comprehensive network»*¹⁶⁵. If this project will be fully implemented, it will certainly revolutionize the existing weak European linkages, in particular East-West connections which are the necessary condition to be satisfied for the future prosperity of the continent as an unanimous entity. The extraordinary relevance of the TEN-T Program lies in the fact that it will improve not only the mobility of freight and people all over the European territory, but it will also develop a greater integration between the different modes of transport, given that they are all involved in this ambitious project. The realization of missing cross-border connections and the removal of existing bottlenecks will be the positive result of a better coordination between the actors involved in the supply chain, and will contribute to a smoother functioning of the whole transportation system in Europe.

¹⁶⁴ EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell'UE – informazioni di base*, MEMO/13/897, Brussels, 17 October 2013

¹⁶⁵ EUROPEAN COMMISSION, *Transport: new EU infrastructure policy*, IP/13/948, Brussels, 17 October 2013

According to data reported by the European Commission, by 2050 freight and passengers transportation are expected to grow respectively by 80% and more than 50%, implying that those areas that will not intervene to improve their infrastructures and connections with the adjoining territory will fail to seize this important opportunity to re-equilibrate their already compromised economic situation.¹⁶⁶



- LEGEND:
- BALTIC-ADRIATIC
 - NORTH SEA-BALTIC
 - MEDITERRANEAN
 - ORIENT/EAST-MED
 - SCANDINAVIAN-MEDITERRANEAN
 - RHINE-ALPINE
 - ATLANTIC
 - NORTH SEA-MEDITERRANEAN
 - RHINE-DANUBE

Figure 8: TEN-T core network corridors (source: EUROPEAN COMMISSION, *Transport: new EU infrastructure policy*, IP/13/948, Brussels, 17 October 2013)

¹⁶⁶ EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell'UE – informazioni di base*, MEMO/13/897, Brussels, 17 October 2013

In this framework, the role of ports in improving European connectivity is crucial. The core network alone, in fact, involves 94 of the main ports of the continent and their intermodal connections with railways and roads.¹⁶⁷ More than 300 ports are interested by the TEN-T Program, and in this regard the Mediterranean region plays a prominent role, as it is involved in most of the nine corridors and in many of the sea route connections foreseen by this ambitious project for the improvement of the connectivity in Europe. The Italian peninsula keeps a leading role in the Mediterranean because of its natural inclination as a logistical platform which derives from its central geographical position in the basin. Significantly, four out of the nine corridors foreseen by the last revision of the TEN-T Program pass through the Italian territory, therefore our country must be prepared to fill the infrastructural gap not to miss this precious opportunity of being integrated within the most important commercial routes.¹⁶⁸ According to an analysis on ports and logistics dating back to May 2012, ports are considered essential strategic nodes for the realization of the Trans-European Network, and the Commission have chosen twelve Italian ports to be listed among the strategic point belonging to the core network, depending on their geographical location and their capacity to handle significant volumes of traffic flows.¹⁶⁹

Ports are the gateways of the trans-European corridors, in the sense that they constitute the nodes through which the huge amount of freight coming from the East starts its continental journey towards inland final destinations. For this reason, ports are asked to act as engines for European growth, taking the necessary measures to be in line with European projects, such as the TEN-T Program, the modernization of port services and infrastructures, the introduction of efficient ICT technologies and not least the reduction of the negative impact of transportation on the environment. One of the strengths of the Trans-European Network proposal, in fact, lies in its environmental dimension, and ports play a key role at this regard. The

¹⁶⁷ EUROPEAN COMMISSION, *Transport: new EU infrastructure policy*, IP/13/948, Brussels, 17 October 2013

¹⁶⁸ FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013, p. 71-72

¹⁶⁹ CASSA DEPOSITI E PRESTITI, *Porti e logistica. Il sistema portuale e logistico italiano nel contesto competitivo euro-mediterraneo: potenzialità e presupposti per il rilancio*, Studio di settore n. 01, maggio 2012, p. 99

implementation of the TEN-T Program will thus favor a substantial shift from the congested and highly polluting road transportation modality to the rail and maritime transport, both considered more environmentally sustainable. While the utilization of the road modality for freight transportation is expected to remain the leader modality in Europe and even to increase in coming years, the objective is to reduce its influence on the supply chain, by employing it only for the shortest journeys, involving in particular the so-called *last mile* towards final destinations.

The idea that lies behind such a proposal is to provide «*the basis for the balanced development of all transport modes in order to facilitate their respective advantages, thereby maximizing the value added for Europe of the network*»¹⁷⁰. According to some estimates reported by the European Commission, with the implementation of the TEN-T Program at a European level, it will be possible to reach the objective of a reduction of 60% in transportation emissions by 2050¹⁷¹, and this will be a great result for the development of an environmental policy in Europe.

The main obstacle to the successful implementation of the TEN-T Program so far, and of other European comprehensive projects, has been the Member States themselves, that for far too long have planned their policies and interventions only on the national level, without realizing of being part of a larger supranational community.¹⁷² According to Sellari, this picture underwent a fundamental change of course with the entrance of new Member States in the early 1980s, when it came to the fore the necessity of filling the infrastructural divide between the founder Member States and the new entries.¹⁷³ This lack of foresight has long prevented a territorial and economic cohesion between countries belonging to the EU, and the outcome of individual policies is clear in today-Europe, that turns out to be a fragmented and highly unstable ensemble of forces. Member States, in fact, are still very different in terms of their national rules and economic availability, and this is surely an additional

¹⁷⁰ EUROPEAN COMMISSION, *Proposal for a regulation of the European Parliament and of the Council on Union guidelines for the development of the Trans-European Transport Network*, COM(2011)650 final, Brussels, 19 October 2011

¹⁷¹ EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell'UE – informazioni di base*, MEMO/13/897, Brussels, 17 October 2013

¹⁷² Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013, p. 98

¹⁷³ *Ibid.*, p. 98

obstacle when dealing with the integration of European networks and the creation of a single European market.¹⁷⁴

When the TEN-T Program came into being in the 1990s, it was addressed to this kind of fragmented and disorganized entity lacking a supranational force in charge of guaranteeing a good level of integration and coordination between the authorities of all European countries. The idea at the base was to shake the status quo with the purpose of moving also the most peripheral areas closer to the commercial heart of Europe making the continent a more functional combination of forces. The project of Trans-European Networks encompasses those that have been defined by Sellari as the five pillars of the Community transport policy, that are a process towards a greater liberalization in the management of transportation structures, a good environmental performance, the constant focus on infrastructures, the individuation of shared technological standards for the integration of national networks, and the realization of efficient East-West connections through pan-European corridors.¹⁷⁵ Of course, such an ambitious program needs very long implementation times and, according to the last estimates, the core network is foreseen to be completed by 2030 while the comprehensive network is not expected to be finished until 2050. The EUR 26 billion recently allocated by the EU for the period 2014-2020 will be addressed exclusively to the realization of the most urgent connections and cross-border sections of the European core network, which means that the priority projects are those that present the greatest value added for the prosperity of the continent as a whole. The funds provided by the European Commission will be assigned on the basis of detailed proposals made by the Member States themselves about plans addressed to the improvement of national and cross-border connections. Then, the money will be allocated to those projects with the highest value added for Europe, always at the discretion of the Commission, bearing in mind that the more a proposal is involved in the core network and the more it is probable that it will obtain funds for its implementation.

¹⁷⁴ EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell'UE – informazioni di base*, MEMO/13/897, Brussels, 17 October 2013

¹⁷⁵ Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013, p. 100

Obviously, the sum of money needed to implement the entire program is abundantly higher, but the extremely difficult current economic situation of Europe will not allow more funds to be allocated for this cause. Therefore, the most probable solution in order to obtain more financial support seems to be the encouragement of forms of public-private partnerships that will push private investors to put money for the realization of the projects according to the established timetable. However, as Sellari has pointed out, because of the lack of an efficient form of supranational coordination and the economic shortage, the current picture concerning the TEN-T Program is critical to the point that twenty years after the formulation of the first priority projects, the great majority of them still exists only on paper, some are in progress and very few have already been completed.¹⁷⁶ In this European comprehensive project lies the real value added for Europe, since it is the only way forward towards the creation of economic growth and prosperity in the coming years. Siim Kallas himself has frequently come out in favor of a more active intervention of Member States in the transportation field:

«Europe needs to invest heavily in transport infrastructure before 2050 to remain competitive. At the moment, Europe is going through difficult economic times. There is a strong and understandable focus on tackling budget deficits and most EU Member States are implementing austerity measures. While this is important, it is not the only way to regain market confidence. Reviving growth must be part of the solution. And for this, transport's role is crucial.»¹⁷⁷

Basically, Europe without an efficient transportation network will fail to revitalize its economy, which is already in serious difficulty. Again, the only way out of the crisis involving the European market is the improvement of transportation infrastructures and the removal of bottlenecks which prevent the easy transfer of freight and people from one mode of transport to the other.

¹⁷⁶ Ibid., p. 107

¹⁷⁷ EUROPEAN COMMISSION, S. Kallas, *Transport financing: the way ahead*, SPEECH/12/53, Brussels, 2 February 2012

3.1.3 The growing importance of Southern Mediterranean ports

Apparently, the Northern Range port system is not the only competitor for Mediterranean ports, and for Italy in particular. Our port system, in fact, is suffering from the threat of a double competition which is creating considerable difficulties. On the one hand, in fact, ports located in the Northern part of the peninsula have to bear the competition of Northern European ports, notably those located in the area going from Rotterdam to Le Havre, namely the so called *Northern Range*. On the other hand, big transshipment hubs in Southern Italy are exposed to the loss of markets shares caused by the development of new terminals in North Africa and in the East Med.¹⁷⁸ It may seem a sort of contradiction that our country is one of the best geographically located in terms of strategic proximity to the most important commercial routes, but is incapable to exploit this huge advantage. Yet, the Italian port system is losing market share in favor of ports located in the Southern shores of the Mediterranean sea, notably North African ports. Important threats to Italian economy are therefore not to be found only within the European territory, as they also come from non-European competitors. Italian ports, in fact, have to share their historical supremacy in the Mediterranean basin with emerging port systems whose competition is very difficult to fight. According to a report issued by the SRM research center, in fact, «*between 2005 and 2012, the main hubs for port traffic in the southern Mediterranean saw their market share increase from 18% to 27%*»¹⁷⁹, and this at the expense of other Mediterranean ports, notably the big hubs in Southern Italy.

The regained centrality of the Mediterranean sea in international routes, due to the great development of the transshipment model inside the basin and to the southbound shift of the centre of gravity of global traffic flows, which are both consequences of the strengthening of Asiatic markets occurred between the 1980s

¹⁷⁸ CASSA DEPOSITI E PRESTITI, *Porti e logistica. Il sistema portuale e logistico italiano nel contesto competitivo euro-mediterraneo: potenzialità e presupposti per il rilancio*, Studio di settore n. 01, maggio 2012, p. 28

¹⁷⁹ See: <http://www.ansamed.info/>, *Italian ports losing market share to southern Med*, 22 November 2013 (last accessed in December 2014)

and the 1990s, has constituted a great opportunity not only for Italy but also for the other countries facing the basin, which have truly taken advantage of the situation.

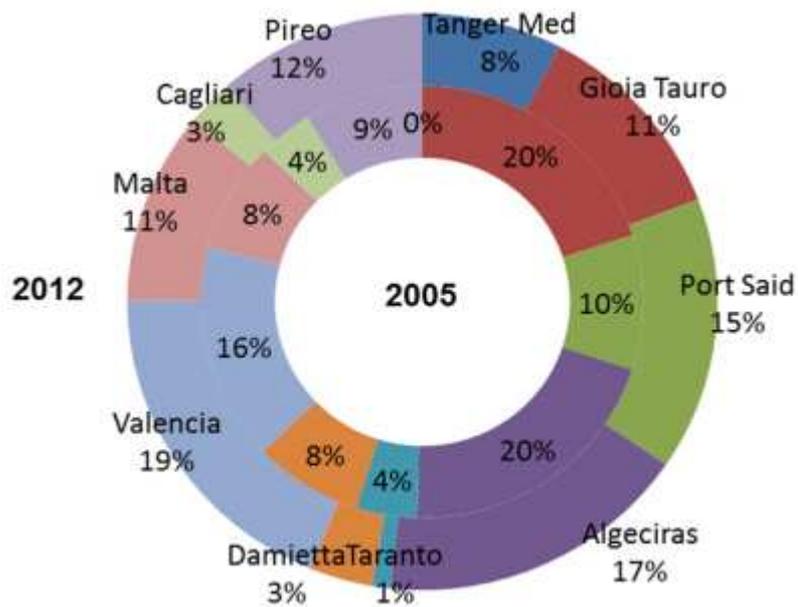


Figure 9: Market shares of the main Mediterranean hubs in terms of handled TEUs. Comparison between 2005 and 2012 (source: SRM annual report 2013, elaboration based on data by Assoport and Port Authorities)

Italy, de facto, has a double advantage over its Southern competitors, which derives both from its favorable geographical position at the heart of the Mediterranean sea and from the fact of being the most convenient point of entry for the big intermodal transportation networks that run throughout Europe. However, looking at the figure above, it seems that our ports are not capable of fully exploiting this advantageous condition. As a matter of fact, each Italian transshipment port that appears in the graph has lost market shares between 2005 and 2012, favoring other Mediterranean ports, among which those that have grown the most are precisely those located at the two points of entry of the Mediterranean sea, namely Port Said and Tanger Med. The low labour costs in ports belonging to the Southern Med area allow them to offer specialized port services at moderate prices, aspect that makes them dreadful direct competitors for the main European ports. Moreover, in recent years they have undertaken a wide range of intervention plans for the infrastructural renovation of their structures. This last point represents a real concern for our big hubs, as the fact that North African ports are investing heavily in the development of their infrastructural endowment makes even more tangible the hypothesis that Italy in the

coming years will be marginalized from the main commercial routes. Another worth-considering aspect that plays against an Italian reacquisition of the leading position in Mediterranean commercial routes is that most of times behind the programs for massive infrastructural adjustment that North African ports are undertaking in recent years there are Chinese huge investments in the area. The great economic growth witnessed by the PRC (People's Republic of China) since the mid-1970s has brought China into the political and economic affairs of some of the countries facing the Mediterranean sea. The development of this recently-emerged world power, in fact, requires an increasing amount of energetic components and raw materials, and here lies the explanation of the growing engagement of China in African countries¹⁸⁰, that are seen both as suppliers of the resources needed and as sales markets for Chinese manufacturing products.¹⁸¹ A great deal of the involvement of the PRC in the African region is represented by economic aid and financial support of construction projects, notably in the infrastructural field. The reason for this is that China, of course, has a strong interest in encouraging the development of African markets to ensure that their demand for Chinese products continues to grow, guaranteeing a kind of certainty in revenues. Indeed, the modernization of strategically-located African ports in the sense of increasing capacity and efficiency, improving inland links, creating jobs and solving security issues, will bring to the increase in the volumes of Chinese products to be exported to Africa, and, in turn, of the amount of raw materials going back to China.

Besides, all that is made easier by the fact that the presence of China is much more tolerated by African countries if compared to the intervention of other states, primarily because of rooted historical motivations, such as the non-colonization of African territories, with which the PRC has always had relations limited to trade and commerce. Moreover, China's interests in the region are perceived as closer to those of African countries since, in the words of Eugenio Bregolat Obiols, that is the former Spanish ambassador to China, «*[it] not only purchases energy and raw materials at*

¹⁸⁰ Pollock G., *Back to the future: understanding China's return to Africa and its implications for U.S. policy*, in *Journal of Public and International Affairs*, vol. 18, 2007, p. 55

¹⁸¹ Bregolat Obiols E., *New Actors in Mediterranean Policies. China's Influence in the Mediterranean*, iemed (Institut Europeu de la Mediterrania), 2010, p. 24

*market prices, but also invests, provides preferential loans, forgives debt, trades, trains thousands of African students and builds infrastructure.»*¹⁸² The evidence of this lies in the realization by some Chinese companies of several structures in African countries, such as the Algiers airport, or the call by the People's bank of China for the introduction of a fund to invest money in the developing world, basically a kind of Marshall Plan for the African continent. A more recent case of Chinese investment in the African territory is the allocation, in March 2013, of USD 10 billion for the realization of a new port infrastructure in Tanzania, to be finished by 2017.¹⁸³ As is often the case, this project have been welcomed by Tanzanian authorities as a precious opportunity not only to enhance the country's maritime skills, but also with the hope that its positive consequences on the national economy could be extended to other sectors. The cooperation between China and Africa is considered so relevant that it has been introduced also in the Beijing Action Plan (2013-2015), in which it is stated that *«the two sides will continue to encourage and support more flights and shipping links to be set up by their airlines and shipping companies, and capable Chinese companies will be encouraged to invest in ports, airports and airlines in Africa.»*¹⁸⁴ This close Sino-African relationship results both in a great development of African economy, that will continue to be supported by Chinese investments in infrastructures and aid, and in a further growth of China that will be secured by the access to African natural resources and raw materials, which are vital for the survival and development of that region.

Given that China's commercial relations with the Mediterranean are expected to grow further in the coming years, each port facing the basin must work on its competitive appeal in order to become the major hub for the distribution of Chinese freight to the European and African continents.¹⁸⁵ After the enlargement of the Suez Canal occurred in 2010, the opportunities of success have increased for the Italian

¹⁸² Ibid., p. 27

¹⁸³ *China's presence in African ports: investment across the ocean*, 2013. Available at: <http://epthinktank.eu/2013/05/13/chinas-presence-in-african-ports-investment-across-the-ocean/> (last accessed in January 2015)

¹⁸⁴ See: <http://www.focac.org/eng/zxxx/t954620.htm> (last accessed in December 2014), Beijing Action Plan, point 4.8 Transportation

¹⁸⁵ Bregolat Obiols E., *New Actors in Mediterranean Policies. China's Influence in the Mediterranean*, iemed (Institut Europeu de la Mediterrania), 2010, p. 24

peninsula, because big shipping companies dealing with the East-West transportation route prefer the Suez option which permits to save time and money, if compared to the eastbound route crossing the Pacific Ocean and the Panama Canal to reach the Atlantic Ocean and then the Mediterranean. However, according to a research presented by SRM in October 2013, the frequent delays in freight delivery and the acknowledged uncertainty affecting the Italian port system as a whole cause that only 6,3% of the cargos that transit through the Suez Canal reaches Italian ports to be then distributed to final destinations.¹⁸⁶ From an Italian standpoint, this data is even more alarming if we take into consideration that a large percentage of the global maritime traffic, namely 19%, transits in the Mediterranean sea¹⁸⁷, and this, de facto, means that our ports intercept less than one third of the totality of traffic flows involving the basin. Again, the geographical position is not sufficient without an adequate infrastructural endowment and the realization of good connections with the hinterland. Of course, this proven inefficiency in the management of traffic flows shown by Italian ports drastically scales down the great opportunities that the reopening and enlargement of the Suez Canal should have created so far. Moreover, in recent years the Canal is congested because of the increasing number of container ships that find it convenient to use this passage to reach the Mediterranean, and this has resulted in long waiting times to go from one point to the other. For that reason, new projects for the further extension of the Suez Canal are underway, both for its enlargement and for the deepening of waters, in view of the future increase of traffic inside the Canal and the consequent rise in revenues. On this basis, Italy must take the opportunity to relaunch its ports, which could become part of the strategic axis shaping traffic flows in the Mediterranean sea, but only if a series of targeted interventions towards ports will be planned within a short time. Given the striking progresses undertaken by the two major ports delimiting the Mediterranean sea to the East and to the West, respectively Port Said in Egypt and Tanger Med in Morocco, the risk for Italian big hubs is to be bypassed losing their function of important ports of call for freight coming from the Far East. As a matter of fact, if our

¹⁸⁶ SRM, *Logistica e sviluppo economico. Scenari economici, analisi delle infrastrutture e prospettive di crescita*, Naples, research presented on 15 October 2013.

¹⁸⁷ SRM, *Le relazioni economiche tra l'Italia e il Mediterraneo*, rapporto annuale 2013

ports will not act to gain international appeal and improve their efficiency and intermodal transportation capacity, in the most probable of future scenarios shipping companies will call only at the ports of entrance in the Mediterranean basin, and Italy will be reached by feeder vessels leaving from there after the big container ships have been unloaded. If this will happen, the gap between Mediterranean ports will grow even wider, as emerging North African port systems will further increase their volumes of containers handled, while Italian transshipment ports will be marginalized to the coverage of only minor functions. However, the Southern Med is not the only port system that emerges as a competitor for Italian transshipment hubs, as also Spanish terminals represent a real threat for our ports. Referring again to the graph concerning the market shares of Mediterranean ports, in fact, those presenting the highest percentage of handled TEUs in 2012 are Valencia and Algeciras, that represent respectively 19% and 17% of the total Mediterranean throughput.

Of course, maritime countries directly facing the Mediterranean basin represent an important economic resource for the European continent as a whole, as the ever increasing commercial exchanges between continental Europe and the Med area significantly contribute to the total income of such countries. As stated in the 2011 SRM annual report, Italy is the first trade partner of the countries in the Southern Med, notably in terms of energetic products, that represent for Italy 43% of the total exchange of goods with this area.¹⁸⁸ Notwithstanding the fact that between 2001 and 2010 it has been recorded a general growth in the volume of commercial exchanges between the main European countries and the Med area, the increase of traffic flows has been much higher as far as Italy is concerned. As it can be observed in the figure below, in fact, in 2011 the value of commercial exchanges involving Italy and the Southern Med stood at EUR 57,7 billions, and was expected to grow further, exactly like today the volume of traffic flows interesting the Mediterranean sea is still likely to increase. This data clearly indicates the great potential that our country could have in the international scenario, if only a targeted reform of the transportation sector was planned and implemented properly.

¹⁸⁸ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.21

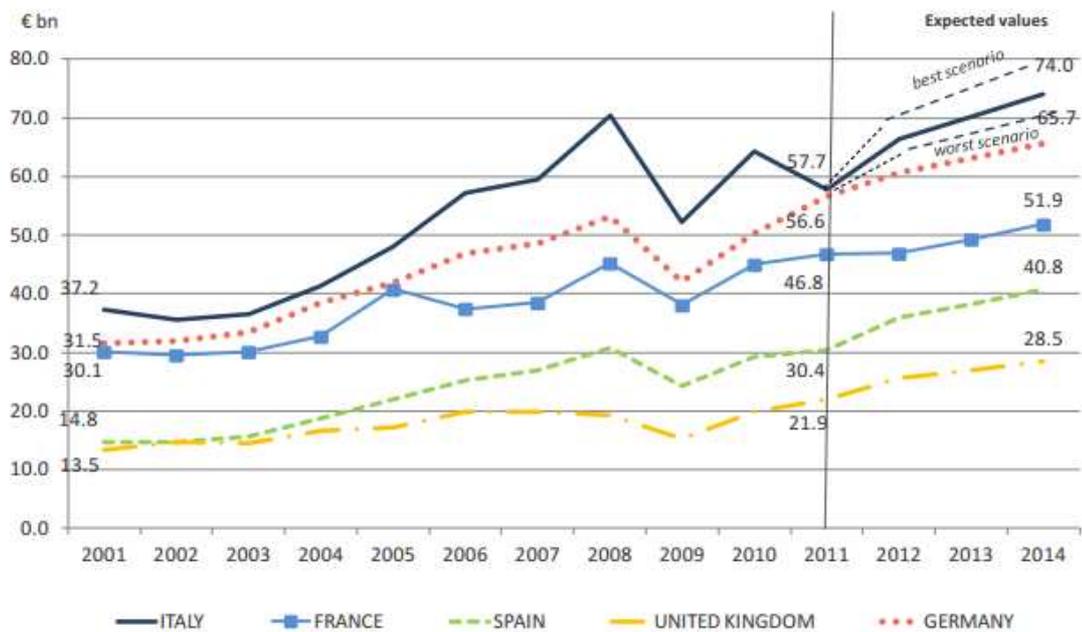


Figure 11: Total goods exchange (import + export) between the main European countries and the Med area – 2001-2011 and esteems until 2014 (source: SRM annual report 2012)

Comparing this graph with a more recent analysis carried out by the SRM in the annual report of 2013 and visible in the figure below, it is worth noticing how the value of the Italian exchange of goods with the Med area has continued to grow until the year 2012 and then has scaled down remaining around EUR 58,3% billions in 2013. What is important to remark is that Italy has lost its leading role in the exchanges with the Southern Med area, being overcome by the United States at the international level and by Germany in Europe. Besides, the even more significant aspect is that the ranking of our country is expected to drop till the fourth place by 2015 in terms of the exchange of manufacturing products, while the energetic component, namely gas and oil, that was 44% in 2013, will probably continue to be largely more influential upon the Italian commercial exchange with the Med area than upon the national income of other European and extra-European countries.¹⁸⁹ If this will verify, among the four leading commercial partners of the Med area there will be two world powers, namely the United States and China, that, although geographically located far away from the Mediterranean basin, have well understood

¹⁸⁹ SRM, *Le relazioni economiche tra l'Italia e il Mediterraneo*, rapporto annuale 2013

the international relevance of this area and want to be part of its economic scenario.

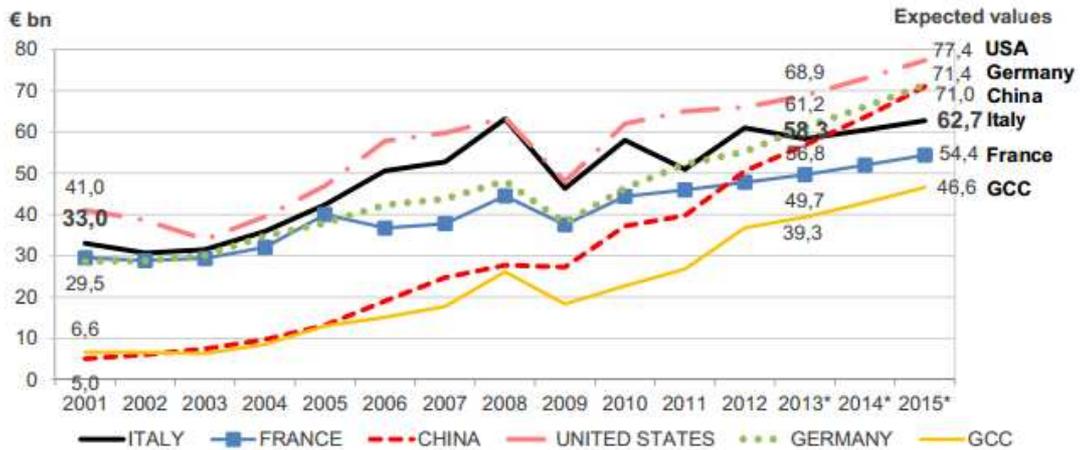


Figure 10: Total goods exchange (import + export) between the main international partners and the Med area – 2001-2013 and esteems until 2015 (source: SRM annual report 2013, elaboration based on data by Eurostat, Istat and Unctad)

Although in this framework of amazing development of Italian competitors, whether European or not, the port of Gioia Tauro, which is the first national transshipment hub in terms of amount of containers handled has recorded a positive trend for the year 2013. This is what the Port Authority of Gioia Tauro affirms in a press release dated January of the last year, in which it is stated that the container sector has recorded a 12% increase in traffic flows in 2013, if compared to the year 2012.¹⁹⁰ Apparently, despite the global crisis involving the European economy, and affecting Italy in particular, the Calabrian terminal has maintained its national leadership over the other ports, thanks to a constant growth and the acknowledged know-how of port operators.¹⁹¹ A significant sign of recovery in this direction was the return of Maersk, one of the world leaders in containers handling, at the port of Gioia Tauro, which occurred last year after two years of absence from the Italian scenes.¹⁹² Again, this is a clear evidence of the fact that if the mere physical characteristics of the port, such as the geographical position or the depth of waters, are followed by high-quality services and an high level of efficiency and know how, the international appeal of the port structure will inevitably grow. Indeed, this is the case of Gioia Tauro, which

¹⁹⁰ See: <http://www.portodigioiatauro.it/news/comunicati-stampa/2014/01/10/si-chiude-l-anno-con-l-asticella-dei-traffici-diretta-verso-l-alto-5/> (last accessed in December 2014)

¹⁹¹ Ibid.

¹⁹² Ibid.

benefits from an excellent location at the heart of the Mediterranean sea and presents passages with the depth of waters between 16 and 18 meters, thing that allows the docking of huge container ships and the management of loading and unloading operations at the port. The figure below shows the above mentioned increasing trend in the volume of TEUs handled that the Calabrian terminal has witnessed between 2012 and 2013.

CONTENITORI MOVIMENTATI			CONTENITORI MOVIMENTATI		
2012	TOT. MOVES	TOT. TEUS	2013	TOT. MOVES	TOT. TEUS
JANUARY	114.978	180.761	JANUARY	153.603	239.892
FEBRUARY	120.889	189.828	FEBRUARY	149.584	238.877
MARCH	151.343	238.993	MARCH	165.726	264.796
APRIL	146.212	229.977	APRIL	172.205	270.687
MAY	160.584	256.063	MAY	180.236	277.314
JUNE	167.749	263.331	JUNE	177.561	273.830
JULY	145.120	225.761	JULY	178.430	272.623
AUGUST	147.909	230.473	AUGUST	174.232	267.834
SEPTEMBER	138.328	219.689	SEPTEMBER	163.024	249.364
OCTOBER	149.108	232.939	OCTOBER	152.923	235.298
NOVEMBER	146.751	229.322	NOVEMBER	153.964	238.863
DECEMBER	143.085	223.967	DECEMBER	168.173	258.017
TOTAL	1.732.056	2.721.104	TOTAL	1.989.661	3.087.395

Figure 11: Container terminal activity in the port of Gioia Tauro. Comparison between years 2012 and 2013. (source: Gioia Tauro Port Authority, see <http://www.portodigioiatauro.it/movimenti-medcenter/>, last accessed in December 2014)

Notwithstanding the existing efficiency and infrastructural gap between Italian ports and the developing port structures located in the Southern Med, Italian hubs are still in race not to lose the huge advantage deriving from their centrality. Of course, Italian financial crisis on the one side, and the extraordinary development of North African markets on the other, have resulted in a general weakening of the competitive and leading position of our country in the Mediterranean scenario.¹⁹³ However, the case of Gioia Tauro demonstrates how, in spite of the difficult economic conditions, Southern Italy is less affected by the crisis, shared also with some European countries, if compared to the national average, and this is probably due to the still lively trade relations that this Italian macro-region has with the Med area. Another aspect that favors the Mediterranean with respect to other areas is

¹⁹³ SRM, *Le relazioni economiche tra l'Italia e il Mediterraneo*, rapporto annuale 2013

the high level of congestion that affects ports in the Northern Range. Given that, as Palazzari pointed out in 2006, containerized traffic is submitted to market rules based on mere convenience, also the position of the most efficient ports gets complicated. Indeed, from this perspective, a congested port, even if located in a strategic point, is less efficient and, consequently, less competitive according to the logics of the international commerce.¹⁹⁴ In theory, the fact of losing competitiveness can imply the marginalization from the main commercial routes, and this would play in favor of less internationally targeted ports, even if usually they are less efficient as well. However, those that seem to be great opportunities for the Mediterranean are often wasted because of the lack of an adequate infrastructural endowment, the scarce attractiveness for foreign investors or the difficult and fragmented connections with the hinterlands, that are the prerequisite for the smooth distribution of goods to final destinations.¹⁹⁵

¹⁹⁴ Palazzari V., *I nostri porti soffocano*, in *Gli imperi del mare*, LIMES – rivista italiana di geopolitica – n. 4, 2006, p. 220

¹⁹⁵ *Ibid.*, p. 220

3.2 RECENT PROJECTS FOR MEDITERRANEAN INTEGRATION

3.2.1 The *Motorways of the Sea* project of 2003

European policies have so far strongly encouraged the shift from the road to the sea transportation modality for the distribution of goods, in the attempt of defining a shared environmental policy aimed at the reduction of the negative impact of the transportation sector on the environment. Unfortunately, too often the promotion of a more sustainable transportation is considered as subordinated to the economic growth, in the sense that the latter is seen as more important than the former. This has brought to a highly polluted environment, and the transportation field is one of the main responsible for this alarming condition. For that reason, the monitoring and reduction of the negative emissions caused by this sector are increasingly more needed at the European but also international level. The only possible solution to limit this problem is the formulation of a new energy strategy that will put the environmental issue at the first place, but without penalizing commercial exchanges and economic growth, the efficiency of which should be definitely encouraged. A possibility for the achievement of this was seen in the so called *Motorways of the Sea*, a project aimed at relieving the traffic congestion from the road and rail transportation modalities to address traffic flows towards the maritime mode, considered more environment-friendly. In theory, the realization of this dense network of sea-links would have provided a picture of Europe as a coherent entity and would have permitted the free movement of freight and passengers not only in a more sustainable way, but also through faster connections and the reduction of useless waiting times. Actually, it was supposed to provide cohesion both between already Member States and also between them and the new candidates to be part of the EU. Moreover, one of the most important aims of the *Motorways of the Sea* was to improve the communication between ports and also their level of connectivity with the most remote areas of the European continent. The idea of using the sea as a huge natural infrastructure stems from the fact that, also according to the SRM annual report 2011, about 90% of the international trade involving Europe passes

through ports.¹⁹⁶ With this in mind, it is easy to understand how important is the realization of efficient connections between them and with the inland transportation system, so that the *Motorways of the Sea* become the functional continuation of the TEN-T networks, but via the sea.

The first formulation of this project dates back to the early 1960s, when the idea was to relieve congestion in the road modality, but, more than anything, it was to create an intermodal network of routes aimed at the efficient connection of terminals located in the North and in the South of Europe.¹⁹⁷ Of course, due to its geographical position and structure of the territory, Italy has always had a prominent role in the project, that provided for a dense network of maritime routes running alongside the whole peninsula, exploiting in this way what was supposed to be the strong point of our country. After a first phase of limited interest and scarce implementation of the project, it was between the 1990s and the 2000s that the need for strong and efficient Mediterranean links became more pressing because of a whole series of contingencies occurred in those years and that have already been mentioned in the course of this dissertation, such as the advent of globalization and the development of Eastern economies. In this framework, therefore, the great potential of the maritime transportation sector was reevaluated and ports turned out to be considered the main engines for strong connections to be put in place. In the early 2000s, some representatives of five countries facing the Mediterranean sea, namely Italy, France, Spain, Greece and Portugal, were charged with finding a solution for the promotion of Short sea shipping (Sss) in Southern Europe¹⁹⁸, and their final report was presented in 2003 in the context of the broader TEN-T project for European intermodality. By its definition, the Short sea shipping is the *movement of cargo and passengers by sea between ports situated in geographical Europe or between those ports and ports situated in non European countries having a coastline on the enclosed seas bordering Europe*.¹⁹⁹ Yet, thanks to the natural asset of the

¹⁹⁶ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.139

¹⁹⁷ Mariano G., *Il mare italiano*, in *Gli imperi del mare*, LIMES – rivista italiana di geopolitica – n. 4, 2006, p. 212

¹⁹⁸ Ibid., p. 213

¹⁹⁹ See: <http://www.shortsea.info/definition.html> (last accessed in December 2014)

countries in the European Union, sea waters are not the only ones that can be involved in such a project, since Europe is characterized by a dense network of navigable rivers and canals that already naturally connect the Atlantic sea in the South and the North Sea, where the major European ports are located.²⁰⁰ The existing system of inland waterways is already massively used by the Northern Range ports, that utilize it for the distribution of a large part of their container traffic, being energy-efficient and environmentally more sustainable than the congested road transportation modality. However, given that the Short sea shipping, to be functional, requires efficient infrastructures and very fast shifts from one transportation modality to the other, the same system applied to the Mediterranean environment is much more problematic. As a matter of fact, the success of this transportation model is heavily dependent on factors such as the deep integration of the maritime leg into the supply chain, the efficiency of the intermodal transportation network and the adequacy of the infrastructural endowment²⁰¹, which are all weak points with regard to the Mediterranean region. Furthermore, one of the strengths of the Short sea shipping mechanism is the rapid shift from one mode of transport to the other, which aims at permitting the smooth and fast distribution of goods to final destinations. However, especially in Southern European ports, the burden of bureaucracy is still too heavy to allow the proper functioning of this kind of transportation model, as the processes needed to organize an intermodal shipment still involve an excessive number of actors and, what is more, there is no law harmonization concerning this issue at the European level.²⁰² What is certain is that all these weaknesses need to be improved as soon as possible, as, apparently, finding a more energy-efficient and sustainable solution for freight transportation is vital for the future prosperity of the European Union. In this regard, «*a greater use of intermodality is one answer. Intermodality makes better use of existing infrastructure and resources, by integrating short-sea shipping, rail and inland waterways into the logistic chain. This gives users more options, and promotes a modal shift away from*

²⁰⁰ EUROPEAN COMMISSION, *White Paper. European transport policy for 2010: time to decide*, 2001

²⁰¹ Pascetta C., *I trasporti marittimi: tra squilibri strutturali e funzionali*, in *Il Mediterraneo. Geografia della complessità*, a cura di Fuschi M., FrancoAngeli, Milano, 2008, p. 175

²⁰² *Ibid.*, p. 175

road transport.»²⁰³ Thus, intermodality is at the heart of the *Motorways of the Sea* project, which is based on the development of a good level of integration between the different modes of transport, with the objective of giving alternatives to the road transportation modality, trying to concentrate traffic flows on sea-based routes and improving cohesion at the European level. The benefits deriving from the implementation of the *Motorways of the Sea* project are not only environmental, but also economic, as often behind the realization of some maritime connections there is the need to circumvent a natural obstacle, that can be constituted by a mountain range that makes the shipment of goods particularly difficult. This is exactly the case, for instance, of freight distribution between France and Spain that is made considerably slower by the presence of Pyrenees. There, the realization of efficient maritime connections that would guarantee a frequent freight transportation service between the two countries would permit to avoid the bottlenecks affecting traffic flows in that geographical area, making the distribution of goods smoother and more rapid. It goes without saying that, in the trade field, the speed of delivery implies time and money savings, therefore the advantages deriving from the implementation of this project present a high value added for the European economy and prosperity.²⁰⁴ European maritime traffic is expected to grow further in the years to come, and the *Motorways of the Sea* are considered to have all the potentialities to absorb a great part of this growth in transportation volumes, but they need a much better coordination between actors and a relevant amount of investments for the realization of new infrastructures and the improvement of those already existing. The potential of this European project is very high then, but it is still largely unexploited. So far, in fact, there are not many examples of realized maritime links in the field of the *Motorways of the Sea* project and with regard to Short sea shipping. Apparently, one of the most successful routes concerns container traffic and it is a RO-RO ferry service carrying trucks from Genoa to Barcelona in relatively short times if compared to the journey from the same origin and reaching the same destination, but done through the road modality. This sea-link allows transport operators to avoid

²⁰³ EUROPEAN COMMISSION, *Trans-European transport network. TEN-T priority axes and project 2005*, Brussels, 2005, p. 9

²⁰⁴ COPIT (Comitato di Parlamentari per l'Innovazione Tecnologica e lo Sviluppo Sostenibile), *Le autostrade del mare*, Rome, 2006.

the bottlenecks affecting inland road networks and to reach the same destination market, but at a more competitive cost. This is basically the reason for which this kind of transportation model needs to be encouraged at the European level, in particular for those routes providing a worthy maritime alternative to natural obstacles such as mountain ranges or to heavily congested inland road and rail networks. Indeed, the development of the Short sea shipping is listed among the top priorities of the European political agenda in the field of transportation, thus implying the promotion of a dense network of frequent and reliable maritime connections, that requires the realization of adequate port infrastructures for the management of big volumes of goods moved through intermodal transportation. During the last ten years or so, the Short sea shipping has undergone a positive development phase which has brought to a substantial progress in the number of routes realized, mainly thanks to a growth in the volumes of traffic flows handled.²⁰⁵ Thanks to its natural structure as a pretty close basin, the Mediterranean region is the area in which the Short sea shipping is concentrated the most if compared to the rest of the European Union, followed by the North Sea. With regard to the Mediterranean, traffic flows are distributed along three main lines, namely the West-Med side, the East-med side and the North African area.²⁰⁶ The first is the most consolidated in the field of the *Motorways of the Sea* project, and incorporates the commercial exchanges between Italy, Spain, France and Malta. The second includes all the international routes connecting with the Balkans, the South-Eastern part of Europe and the Middle East and, because of the high growth potential of the countries it consists of, it is an area which is expected to undergo a substantial economic expansion. The port industry of those countries is growing rapidly, it suffices to think about Port Said, which is today among the very first ports for containers handling in the Mediterranean region. The third freight distribution line concerns the area of North Africa, and manages all the traffic flows addressed to, and coming from, the developing markets of the countries in that region. Again, we are talking about economies which are growing a lot, therefore it is very likely to foresee

²⁰⁵ Buonfanti A., *Lo shipping e la portualità nel Mediterraneo: opportunità e sfide per l'Italia*, rivista di economia e politica dei trasporti, n. 3, 2013, p. 10

²⁰⁶ Ibid., p. 12

an increase in the number of maritime routes that will be implemented, and also their further integration into the European commercial network.²⁰⁷

As far as Italy is concerned, the central position of the peninsula has permitted a relevant development of Short sea shipping services, so that our country is the first in the European Union in terms of freight transported with this modality through the Mediterranean basin. However, despite the wide diffusion of this transportation trend, in Italy the progress of the *Motorways of the Sea* project still presents some critical points, such as the excessive burden of bureaucracy and the still inadequate infrastructural endowment, which does not allow for a high interoperability between intermodal transport operators. Furthermore, the use the Short sea shipping modality is too often limited to the communication between the Italian peninsula and the islands, both with regard to freight and passengers transportation.²⁰⁸ Apparently, the great potential of the maritime modality as a more sustainable and cost-effective transportation option is not as much exploited as it should be, as, except from the presence of sea-route connections with the islands, which in many cases are only seasonal, there are very few examples of sea links between ports that are effectively used as an interesting alternative to the correspondent road leg. Although there has been a succession of positive and negative phases in the development of this transportation modality, the strategic advantage of Italy in the Mediterranean basin remains undisputed, even if it has suffered from a relevant economic downturn because of the economic crisis that affected Greece and of the disorders caused by the Arab Springs in the North African area. These events have undoubtedly determined a negative commercial phase for the transshipment ports of the Med area, but, in some cases, they have also created favorable circumstances for some maritime countries, such as Italian and Spanish terminals, that have been reconsidered by international shipping companies as being less risky for commercial exchanges than the ports located in the North African shore.

²⁰⁷ Ibid., p. 12

²⁰⁸ Ibid., p. 15

3.2.2 Marco Polo and Galileo

Similarly to the *Motorways of the Sea* project, there are several other initiatives addressed to the promotion of the intermodal transportation for the reduction of all negative impacts of the sector of transports on the environment. One example of this is the Marco Polo programme, the first call for which is to be found in the White Paper of September 2001, that outlined the need for the development of a system of combined transportation based on the intermodality and interoperability between maritime and inland transportation modalities. This programme was meant to «support actions aiming at shifting the forecasted increase of freight from roads to short sea shipping, rail and inland waterways or to a combination of modes of transport in which road journeys are as short as possible.»²⁰⁹ The main objective of this European initiative is the shift of a substantial portion of freight transportation from the roads to the sea, to inland waterways and to the rail modality. The reasons that lie behind the development of such a project are the already mentioned improvement of the environmental performance of European countries in the field of transportation, the attempt of relieving congestion on the road network and, obviously, the ever greater interest for a more efficient, reliable and cost-effective transport of goods. It goes without saying that in order to achieve such ambitious objectives European countries need to change their attitudes, to stop thinking individually and to realize that they are an active part of a complex system with a great potential for the economic growth and the prosperity of all of them. They have to formulate national policies for transportation that are consistent with the regulations and institutions of the European Union, and they need to support innovations with the introduction of ICT technologies for the improvement of the communication between the different modes of transport. All these principles are incorporated into European initiatives such as the Marco Polo programme, which is supposed to strengthen the interoperability between the operators involved in freight transportation, improving logistics and fostering intermodality.

²⁰⁹ EUROPEAN COMMISSION, *The Marco Polo programme – results and outlook*, COM(2013)278 final, Brussels, 14 May 2013

After the first Marco Polo programme, dated 2003-2006, a second one was set as the continuation of the former, with the same basic purposes, but with some substantial differences too. First of all, the Marco Polo II has benefited of a greater budget, namely EUR 450 million for the period 2007-2013, a much higher sum of money if compared to the EUR 75 million that were allocated in 2003 for the first part of the project. Moreover, although the aims of the programme remain unchanged in respect to the Marco Polo I, this second part of the plan opens to a broader set of themes, incorporating also the issues presented by the *Motorway of the Sea* project, such as the renovation of the infrastructural endowment and the realization of sea-networks for the better distribution of goods. The Marco Polo programme represents a European attempt to improve people's way of living all around Europe, by minimizing the amount of trucks on the continental road network encouraging the use of greener transportation modes, thing that will hopefully bring the environmental pollution back to acceptable levels. The striking results already achieved by the two Marco Polo programmes are clearly understandable looking at the graph below, which explains their positive outcomes in terms of figures.

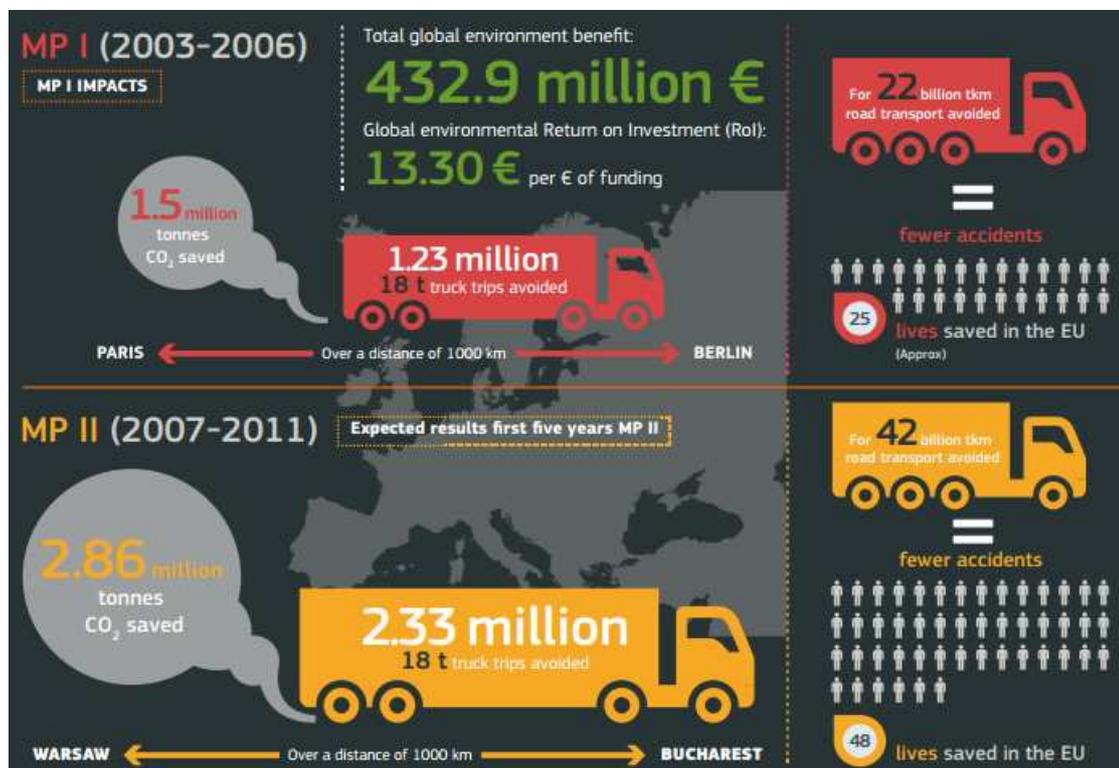


Figure 12: Results achieved by the Marco Polo I and Marco Polo II programmes in the period 2003-2011 (source: <http://ec.europa.eu/transport/marcopolo/>, last accessed in December 2014)

As shown by the figure, the negative impact of the transportation sector on the environment has been considerably reduced, with a CO₂ saving of 1,5 million tonnes in the period 2003-2006, correspondent to the Marco Polo I programme, and 2,86 million tonnes of CO₂ saved thanks to the implementation of the Marco Polo II. Also, there has been an improvement of the security issue, with a relevant reduction of deaths due to road accidents related to the transportation activity, which is an aspect not to be overlooked. According to data by the European Commission, «over the period 2003-2009, 125 projects have received funding from the Marco Polo programme»²¹⁰ and 79% of the funding has been addressed to modal shift actions, that are those projects that attempt to shift freight transportation from the road to other modalities, which is the first step towards a better management of shipments and a more organized distribution of goods.

Another example of initiative addressed to the improvement of European connectivity is the Galileo project, which answers to the need to introduce advanced technologies in the transportation sector. According to the definition provided by the ESA (European Space Agency), Galileo is «Europe's own global navigation satellite system, providing a highly accurate, guaranteed global positioning service under civilian control.»²¹¹ Basically, it follows logics which are very similar to GPS (Global Positioning System) and GLONASS (Global Navigation Satellite System), namely the satellite navigation systems created respectively by the USA and Russia, and it is also designed to be interoperable with them, even if not dependent upon them. However, an important difference to be noticed is that, while both the above mentioned systems have been financed for military purposes, the services offered by Galileo are available to all users, without the eventuality that the satellite signal is cut by the government in the name of political interests.²¹² Obviously, there will be different degrees in the availability of the services provided: in particular, the less

²¹⁰ See: http://ec.europa.eu/transport/marcopolo/in-action/index_en.htm (last accessed in December 2014)

²¹¹ See: http://www.esa.int/Our_Activities/Navigation/The_future_-_Galileo/What_is_Galileo (last accessed in December 2014)

²¹² EUROPEAN COMMISSION, *White Paper. European transport policy for 2010: time to decide*, 2001

accurate capabilities will be free for all users, while users which want to use the facilities giving the most high-precision information will be charged for the service.²¹³

The first steps of the Galileo programme date back to the mid-nineties, when the European Commission started to collaborate with the ESA for some studies on the feasibility of a system that would provide the satellite coverage of all the European territory and beyond. However, it took until October 2011 before the first two satellites were launched into space.²¹⁴ Then, a third and a fourth satellite were launched the following year, and the first successful positioning test was conducted on March 2013, when, for the first time, the determination of a position relying only on the signals emitted by the four satellites already deployed was possible.²¹⁵ The achievement of this incredible result has been driven both by the already deployed satellites and by the European ground infrastructural endowment expected by the programme, namely the control centers and monitoring stations on the ground. In the words of Antonio Tajani, European Commissioner for Transport from 2008 to 2010²¹⁶, those launches are «*the proof of Europe's prowess in the field of space activities*»²¹⁷, and represent a milestone for the achievement of a real European competitive advantage in the field of transportation. Once completed, the Galileo project will make easier not only freight transportation, but also the movement of people within Europe. Every existing route, in fact, will be known by this satellite system, which will provide users with real-time information about the less congested way to follow in order to reach the destination in the fastest and most cost-effective manner available. In that sense, this project is also targeted to the improvement of European countries' environmental performance, as, thanks to the 30 satellites it is planned to consist of, it will be able to suggest to the users the best route to take in order not only to enhance the efficiency of the transportation

²¹³ EUROPEAN COMMISSION, *Galileo will boost economy and make life of citizens easier*, MEMO/11/717, Brussels, 21 October 2011

²¹⁴ EUROPEAN COMMISSION, *Galileo: Europe launches its first satellites for smart navigation system*, IP/11/1220, Brussels, 21 October 2011

²¹⁵ EUROPEAN COMMISSION, *First steps of Galileo – European satellite navigation system achieves its first position fix*, IP/12, Brussels, 12 March 2013

²¹⁶ See: <http://www.antoniotajani.it/about/> (last accessed in December 2014)

²¹⁷ EUROPEAN COMMISSION, *Galileo: Europe launches its first satellites for smart navigation system*, IP/11/1220, Brussels, 21 October 2011

network, but also in order to use the less amount of fuel, helping in that way to minimize the environmental pollution caused by the road transportation modality. The more satellites will be deployed, the more the Galileo system will be reliable and accurate in measuring distances. Again, in the words of Antonio Tajani:

«Galileo is of strategic importance for the independence of the European Union regarding satellite navigation and will offer a relevant contribution to the implementation of the Europe 2020 strategy for growth., It will significantly contribute to the economic recovery of Europe and address major challenges such as sustainable transport»²¹⁸

The full deployment of the Galileo project will provide Europe with a strategic independence from other world powers such as the USA or Russia, and all the sectors of the economy will benefit from the innovations deriving from its implementation. More efficient production processes, increased speed of freight delivery, reduced impact of the transportation sector on the environment, greater safety for road users²¹⁹ are only some of the numerous advantages that the development of such a programme will bring. Europe, therefore, needs to seize this important opportunity and fully exploit its own potential in order to innovate its capabilities in the transportation field, thing that will also enhance the way of living of European citizens.

²¹⁸ EUROPEAN COMMISSION, *Galileo will boost economy and make life of citizens easier*, MEMO/11/717, Brussels, 21 October 2011

²¹⁹ Ibid.

3.2.3 e-Freight and e-Maritime projects

Alongside the above mentioned initiatives dealing with the renovation of the European infrastructural endowment and the monitoring of routes in order to enhance both freight and passengers movement within the continent, there are also other European programmes that are worth nominating, which aim at the better management of information along transportation chains. E-Freight and e-Maritime projects are some examples of initiatives promoted by the European Union which go in that direction, helping an easier exchange of information during all the phases of the supply chain and calling for a somewhat reduced involvement of bureaucracy in transportation and logistics.

According to its definition, e-Freight *denotes the vision of a paper-free, electronic flow of information associating the physical flow of goods with a paperless trail built by ICT. It includes the ability to track and trace freight along its journey across transport modes and to automate the exchange of information for regulatory or commercial purposes.*²²⁰ The e-Freight Integrated Project was launched by the European Commission in January 2010 involving 30 partners from 14 Member States and Norway and one of its most characterizing features is the application of ICT technologies to the transportation sector.²²¹ Basically, it is about *linking the physical flow of goods to an electronic flow of information*²²², simplifying the administrative side of logistics whilst enhancing the integration and interoperability between modes of transport and between them and the new technologies introduced in the transportation field, with an emphasis on the promotion of the environmental sustainability. In the view of experts, the further automation of this field brings benefits to all the actors involved in the supply chain, from the international shipping companies to the final consumer, thanks to the optimization of door-to-door transportation processes that make possible a greater availability of any good in any moment. As far as shippers and freight forwarders are concerned, then, the

²²⁰ See: http://www.efreightproject.eu/knowledge/defaultinfo.aspx?areaid=47&index=2#_ftnref4 (last accessed in January 2015)

²²¹ See: <http://www.efreightproject.eu/default.aspx?articleID=1121> (last accessed in January 2015)

²²² See: http://www.efreightproject.eu/knowledge/defaultinfo.aspx?areaid=47&index=2#_ftnref4 (last accessed in January 2015)

opportunity to choose the best transportation option available and to be advised of real-time problems along the route thanks to a better exchange of information between operators is undoubtedly a great advantage that has positive implications for the speed and efficiency of the service provided.

But how does this initiative affect the role of ports in the transportation field? Given that they are strategically important platforms for the development and proper functioning of the intermodality option in freight transportation, the improvement of the communication channel between all the operators involved in the supply chain certainly affects positively the position of ports as key points for the sector. Of course, this is the reason for which European ports are very interested in the implementation of such a project, as the facilitation of information exchange will undoubtedly contribute to enhance their efficiency, first of all avoiding delays in freight delivery, and, consequently, their competitiveness on the international stage. In this respect and closely related to the e-Freight project is the e-Maritime initiative, promoted by the European Union with the aim of improving the maritime transport in particular. For that reason, this project is even more interesting from the point of view of the subject of the present digression, namely ports and their extremely relevant position in transportation activities. As stated by Dimitrios Theologitis, head of maritime transport and ports policy, *«e-Maritime is the use of advanced information technologies for working and doing business in the maritime transport sector»*²²³. The project recognizes the absolute value of the ICT technology and the great potential of these systems applied to the maritime transportation field.

*«The e-Maritime initiative is aimed at supporting the development of European capabilities, strategies and policies facilitating the adoption of solutions in support of an efficient and sustainable waterborne transport system fully integrated in the overall European transport system.»*²²⁴

The main purpose of such a programme, in fact, is to work on the coordination between the maritime and the inland transportation networks, making the sea

²²³ See: <http://www.efreightproject.eu/knowledge/defaultinfo.aspx?areaid=44&index=2> (last accessed in January 2015)

²²⁴ Ibid.

modality safer and more environmentally sustainable, and making the shift to the other transportation modes faster, thing which is possible only in a more integrated global system, in which the sea-route connections are as efficient as the inland road and rail linkages and result deeply interconnected between each other. In that sense, in fact, the e-Maritime project is perfectly aligned with the TEN-T program, which presents very similar objectives but, of course, from the land perspective. Even if the world we are living into should be extremely interconnected due to the advent of globalization and the consequent openness of markets and emergence of advanced communication technologies, the procedures needed for freight transportation are, even today, too slow and excessively nit-picking. Furthermore, the administrative side of the transportation of goods is still too often done on paper²²⁵, and this not only is not environment-friendly because of the useless waste of paper and time, but it also increases the chances for human error as shipping companies have to enter the same data manually at each port call. The whole matter would be different if Europe had a proper-functioning system for the exchange of information in an electronic form, since data would be submitted only once and through a device. Besides transport infrastructures, therefore, it is the side of bureaucracy that needs to evolve, going towards a more automated management of information along the supply chain. As Dimitrios Theologitis outlined during an interview about the role and purposes of the e-Maritime project in 2010, the success of the whole program is heavily dependent on the joint work of Port Authorities and Maritime Administrations that have to set up all the system devices in order to be able to receive all information in electronic form.²²⁶ What Europe really needs is the setting of a single communication standard for each document required by transportation procedures and a full understanding of the way to transmit it, that has to be unanimous in all Member States. This is to be done before the real automation of the system and before any facilitation of the maritime transport system can take place, and this is the main reason for the quite long times foreseen for the complete

²²⁵ See: http://ec.europa.eu/transport/modes/maritime/e-maritime_en.htm (last accessed in January 2015)

²²⁶ Dimitrios Theologitis interviewed by George Hoyt, *EU Bleu Belt*, 8 November 2010. Available at http://www.faceofshipping.com/gallery/by_organisation.php?org=European%20Commission (last accessed in January 2015)

implementation of the project itself.²²⁷ The objective of Member States participating in the e-Maritime programme is thus to transform the fragmentation still affecting European port industry into a coherent system based on uniform standards shared by all maritime countries. Again, in the words of Theologitis, once this project will be fully developed, it will hopefully facilitate shipping, which nowadays is the key for European prosperity because it is considered to be the most sustainable mode of transport, since it creates both less noise and less pollution whilst, of course, helping to relieve road congestion.²²⁸

²²⁷ *Ibid.*
²²⁸ *Ibid.*

CHAPTER IV

A FOCUS ON ITALIAN SITUATION: TIME TO DECIDE

«Be the change you wish to see in the world»²²⁹

(Gandhi)

4.1 NATIONAL POLICY ON PORTS

4.1.1 Law 84/1994 and its impact on ports

After the digression made in the previous chapters concerning the function of ports and their importance for the European commercial prosperity and international appeal for users and foreign investors, it is worth focusing on the situation of the Italian peninsula in particular. As it has already been said, thanks to its geographical position at the heart of the Mediterranean sea, Italy has a high number of ports, but it suffers anyway from the competition of other more qualified maritime systems located both in Northern Europe and in the Southern and Eastern part of the Mediterranean. One of the major changes the world trade has been undergoing in recent decades is reflected by the new prevalence of the Asian-European commercial relations over the more traditional economic exchanges there used to be between Europe and North America.²³⁰ This has been determined by the exceptional growth of Eastern economies that has made of the Mediterranean basin both a relevant market for the exportation of goods and a strategic point of access to maritime and continental European countries. The geographic advantage of Italian ports in this framework is therefore clear, but, in order to have a part in the European and international scenario, they need to act towards the definition of a national strategy that would permit them to take a leading part in the framework of East-West trade relations before it becomes too late. The deadline is not so far away, and increasingly more actors are entering the scene of maritime traffics, and with very positive

²²⁹ Mahatma Gandhi, *Quit India speech*, 8 August 1942

²³⁰ Costa P. and Maresca M., *The European future of the Italian port system*, Venice, Marsilio Editori, first edition: December 2013, p. 8

outcomes for their developing economies. On the contrary, this situation is having damaging effects on the Italian port industry, which is visibly losing market shares, mainly because of its incapability to take a reliable position and to offer more guarantees to international transportation operators and to foreign investors. Basically, the Italian port system is facing a parting of the ways: its future is either in Europe or it is not.²³¹ Given that the volume of maritime traffics is expected to grow even further in the coming years, focusing on ports means to be prepared for this change in the paradigm of international trade. Ports are the field of interest in which the European game will take place, and, as soon as this will determine winners and losers, Italy have to find the way not to lose its important geographical advantage because of technical inefficiencies.

Italian port policy is still today based on the reforming law approved in 1994, which has contributed to restore the competitiveness of the Italian port sector. Briefly, law 84/94 (Italian port reform law no. 84 of 28 January, 1994) provides a systematic regulation of the port subject as far as the Italian port system is concerned, in accordance with the ambitious objectives of the national and European plans for transportation. Ports have always been considered as public goods by Italian law and they were subjected to the authority of the central State, in order to avoid the fragmentation and confusion of tasks, port activities and functions.²³² A limited number of port organizations in some of the major Italian ports arose in the early 1900s to be then dissolved during the Fascism, following the idea of the regime, in which only a single centralized power can exist.²³³ Afterwards, they were re-introduced to recover a wider range of port functions, but they did not use to benefit from a standardized level of autonomy similar to all ports. Of course, it is easy to imagine how this mechanism of centralized control of port operations has resulted as highly inadequate when epochal changes such as containerization and the promotion and development of intermodal transportation appeared for the first time in the second half of the 20th century. From that moment onwards, there has been a series

²³¹ Ibid., p. 7

²³² Valleri M.A., Lamonarca M. and Papa P., *Port governance in Italy*, in *Research in Transportation Economics*, vol. 17, 2007, p. 143

²³³ Ibid., p. 144

of proposals for the reform of port regulation, aiming at adapting the port sector to the evolution of required port services and to the new challenges brought by the changing international trends related to the maritime sector. Law 84/94 is only one of the many calls for ports reform, but it is undoubtedly among the most relevant in terms of the significant changes it brought in the management of the port subject. Besides providing a classification of ports into categories depending on their function, therefore whether they recover military or commercial positions or whether they have national or international economic relevance²³⁴, law 84/94 operates a separation of tasks between private port enterprises and port authorities. Specifically, the former deals with the implementation of port operations, while the latter deals with the monitoring and control of the way in which port activities are carried out. The figure below shows the structure of the Italian port system according to the law 84/94, with the introduction of different types of authorities having different degrees of autonomy depending on the parameters presented by each port.

Type	Criteria
Port authorities	24 major ports, a number likely to increase if the parameters of traffic set by the law are met (for three years, traffic volume not lower than 3 million tons per year or 200,000 TEUs); these are non-economic public bodies endowed with juridical personality and administrative, budget and financial autonomy within the limits set by the law
Maritime authorities	Lesser ports, which do not meet the parameters necessary for the constitution of a Port Authority; these are decentralized structures of the central government without decision-making autonomy
Special port enterprises	These are present in the ports of Chioggia, Monfalcone, Porto Torres and Agrigento; such facilities are constituted and financed by the Chambers of Commerce

Figure 13: Port structure in Italy according to the law 84/94 (source: Valleri M.A., Lamonaarca M. and Papa P., *Port governance in Italy*, in *Research in Transportation Economics*, vol. 17, 2007, p. 146)

Generally speaking, port authorities have a more political function, dealing with the planning and coordination of port operations and with the control over all the activities that take place within the port area. On the other hand, maritime authorities are more focused on the supervision over coastal borders and on the protection of the maritime environment, as well as on providing sea assistance and

²³⁴ *Ibid.*, p. 140

sea rescue services while regulating secondary-importance port activities, if compared to those organized by port authorities.²³⁵ However, in spite of these premises, port authorities do not enjoy absolute decision-making powers. In fact, as it has been stated by Valleri et al. in 2007:

«The port authority is a public body endowed with legal status, with administrative autonomy that is subjected to restrictions imposed by the Ministry of Transport and with budgetary and financial autonomy subjected to restrictions imposed by the law.»²³⁶

The introduction of law 84/94, therefore, has undoubtedly brought a revolutionary wind of change into the Italian port system, but it is no more appropriate to manage the Italian port sector as it appears today. There are still some elements that obstruct the free expression of port authorities towards a real competitive development of ports of our peninsula, which are extremely relevant both for the Italian and for the European economic prosperity. This law entrusts the management of Italian ports to 23 port authorities, created in the port sites that presented the highest value added for national interest. Those authorities have been given the above mentioned functions of planning, coordination and control of port activities, but they were supposed to be dependent on the Ministry of Transport. This is a management inefficiency seriously affecting port authorities, which can benefit only from a fake freedom of action, since they have the full responsibility for the planning of port reforms, but they do not have financial autonomy for their final implementation.²³⁷ Basically, what the Italian port system has witnessed was the transition from a completely public management of ports to an administrative structure in which public and private actors cooperate, with different functions, in order to reach the common objective of improving port reliability and operational efficiency.²³⁸ Port authorities work now alongside a multitude of other institutional

²³⁵ Ibid., p. 145-146

²³⁶ Ibid., p. 145-146

²³⁷ Vanuzzo A., *I porti italiani sono i grandi assenti del Mediterraneo*, 15 January 2013. Available at <http://www.linkiesta.it/porti-italiani-inchiesta> (last accessed in January 2015)

²³⁸ The European House – Ambrosetti, *Il rilancio della portualità e della logistica italiana come leva strategica per la crescita e la competitività del Paese. Documento di indirizzo strategico*, research promoted by Assoport, Fedespedi and Federangenti, 18 June 2013, p. 21

subjects, each one having a precise function, as it is clearly shown by the figure below. The role of port authorities is limited to the monitoring and control of port activities, in which they are assisted by other actors providing a multitude of services dealing with public security.

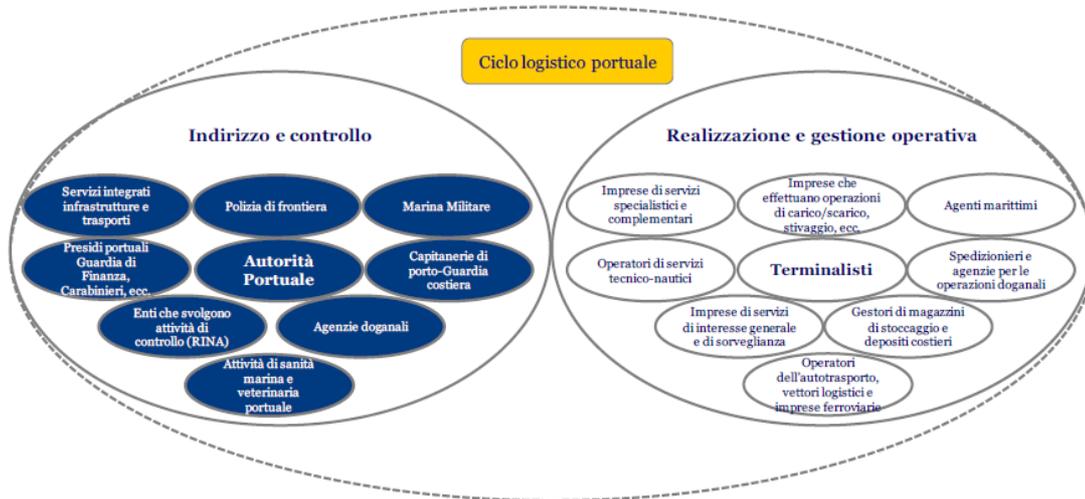


Figure 14: Separation of tasks between actors involved in the logistic port system (source: The European House – Ambrosetti, *Il rilancio della portualità e della logistica italiana come leva strategica per la crescita e la competitività del Paese. Documento di indirizzo strategico*, 2013, p. 22)

It goes without saying that the high complexity of such an administrative system requires a level of coordination between all the actors involved in the port sector that is at least as high as that complexity. However, the issues concerning this last point have been very problematic for port development and particularly for the harmonization of port systems along the Italian peninsula. As stated in the Ambrosetti report, in fact, ports reform has taken place in an uncoordinated way, resulting in a multitude of administrative models which are different from port to port.²³⁹ Although this can surely be considered a positive aspect, since each port has the opportunity to act in conformity to its own characteristics and functions, it becomes a problem when decisions are taken by local authorities more in the name of individuality and geographically restricted interests, than for the sake of the national economic prosperity. Again, according to the analysis conducted by Ambrosetti, it is difficult to refer to Italian ports as a system, because of the great fragmentary nature of their administrative and governance models.²⁴⁰ The plurality

²³⁹ Ibid., p. 24

²⁴⁰ Ibid., p. 26

of actors involved in the decision-making processes makes the *iter* for measures approval in the port sector even longer, since it can be obstructed or stopped by the predominance of local interests over the search for national wealth. If compared to other European port systems, the role of port authorities in Italy, as well as in all the Southern and Western part of Europe with the exception of the United Kingdom²⁴¹, is quite limited, in particular in relation to the scarce financial autonomy that characterizes them. The number of Port Authorities needs to be reduced to their presence only in major ports and, more specifically, in those ports that are particularly relevant for European connectivity because they are fundamental nodes for the TEN-T and *Motorways of the Sea* projects. Once decreased the number of Port Authorities, another important issue is the re-definition of their role, that cannot be limited only to the port site as such, if the key word of the modern era is integration between systems and networks. It would be useful if their control was extended also to other structures concerning the port, for example to inland sorting centers, thing that will also help to improve the communication channel between the port and its corresponding hinterland. On the contrary, if they continue to be treated as separated entities, without thus favoring their coordination with each other, it will not be reached a level of integration sufficient to make Italy competitive on the European and international stage.

Alongside those integration and coordination aspects concerning the management of ports, there is the administrative side of the problem. Italian ports, in fact, are still excessively tied to slow bureaucratic procedures that extend out of all proportions the time required for decision-making in the maritime sector. One of the most successful issues promoted by the law 84/94 that had a great impact on ports was the encouragement of terminals privatization, according in such a way more freedom of action to port authorities and maritime institutions. This substantial change is relevant for two main reasons: on the one hand, in fact, the reduced intervention of the State in port affairs has allowed the authorities with a high competence concerning the port subject to have the responsibility for the decisions taken with regard to this field, in the sense that resolutions and actions were taken by ports for

²⁴¹ *Ibid.*, p. 17

ports. On the other hand, the greater autonomy accorded to port authorities has brought some consequences on the international appeal of Italian ports, since, given that thanks to the port reform each port can now decide for itself, the port systems that continue to stay in the market are those that «*appear as more desirable in terms of time and quality of services.*»²⁴² Ports after the introduction of the law 84/94 are no more only mere executors of measures taken by the central government, but they have to be considered as complex structures that have the important function of linking the sea with the land in the most efficient way available. They are active players in the commercial field, and also the territory around them acquires a fundamental role for the support of port operations and the development of intermodal transportation services. However, global commercial networks have considerably changed since the early 1990s, first of all in the volumes of traffic flows, that have enormously increased. As a consequence, law 84/94, although very revolutionary for the moment it was introduced, presents today some critical points that need to be overcome. During these twenty years, in fact, some proposals have been made for the reform of such a law, for instance calling for a broader autonomy of each Italian region in the control and planning of the development of ports located within its territory.²⁴³ If this would be the case, each region could decide for itself in the most appropriate way, taking measures in accordance with the specific characteristics and functions of its ports in particular, avoiding the useless standardization of regulations and interventions. Obviously, this is in line with the warmly encouraged specialization of ports, in particular of those belonging to the same maritime area, in order to avoid the current situation of competition between ports of the same region that contributes to weaken the competitive power of the whole national port system. The proposals for the reform of law 84/94 are particularly focused on re-defining the role of Italian regions in relation to the state, with a view to the devolution of political and decision-making functions to them and aiming at the introduction of rules for a greater financial autonomy of port authorities. Besides, also the call for a sharp simplification of bureaucratic

²⁴² Valleri M.A., Lamorcarca M. and Papa P., *Port governance in Italy*, in *Research in Transportation Economics*, vol. 17, 2007, p. 151

²⁴³ Bennici M., *La governance regionale dei porti italiani: la legge 84/94 e le sue proposte di riforma*, in *Le istituzioni del Federalismo: rivista di studi giuridici e politici*, n. 1, 2006, p. 135

procedures when dealing with interventions such as the deepening of waters or with simple transportation activities is very popular among the proposals for modification and modernization of the port subject presented by the 1994 law.²⁴⁴ The introduction of port reform in the early 1990s had an undoubtedly positive impact on Italian ports, that managed to return in the market overtaking a period of crisis due to their inefficiency, low competitiveness and scarce reliability. After privatization, in fact, they have gradually regained market shares and a prominent role in international trade routes, thanks to the adoption of more competitive prices and to a considerably enhanced efficiency in port operations.²⁴⁵

Then, actually, although law 84/94 has really marked a watershed in the model of port governance, a lot remains to do for the Italian port system to become highly competitive on the international stage. The premises which that law was based on have changed over years with the result that today the most relevant issue is no more only that of regulating the port sector, but it is to secure a good coordination between the different actors participating in port operations. As already mentioned, this is a very challenging matter, since the more actors enter the port management sector and the more points of view and interests are involved. However, the easiest way to move around, that is to reduce the number of institutions participating in port affairs, is not applicable because in a situation of economic crisis and scarce financial resources as this is the case today, the involvement of private capitals becomes necessary.²⁴⁶ In other words, and taking the just mentioned problem only as an example, law 84/94 needs to be overcome because the reasons for which it was introduced are no more existing. What Italy needs is a decisive intervention both in ports administration and in the realization of new infrastructures, since one of the weakest points that still affects our transportation sector today is the inadequacy of connections between ports and their hinterlands. The scarce efficiency of the links between the sea and the land, when they are existing, heavily undermines Italian

²⁴⁴ CNEL(Consiglio Nazionale dell'Economia e del Lavoro), *La competitività della portualità italiana. Osservazioni e proposte*, 27 January 2005, p. 7

²⁴⁵ Pascetta C., *I trasporti marittimi: tra squilibri strutturali e funzionali*, in *Il Mediterraneo. Geografia della complessità*, a cura di Fuschi M., FrancoAngeli, Milano, 2008, p. 166

²⁴⁶ The European House – Ambrosetti, *Il rilancio della portualità e della logistica italiana come leva strategica per la crescita e la competitività del Paese. Documento di indirizzo strategico*, research promoted by Assoport, Fedespedi and Federangenti, 18 June 2013, p. 30

logistics and the projection of our ports into the international market. As Bennici has pointed out, the future development of the national port network is heavily dependent on the administrative approach that ports will take, because the match on competitiveness will be played in the tension between the maintenance of a system based on state administration, and the accordance of some tasks to the more competent local authorities.²⁴⁷

4.1.2 The Italian approach to intermodality: freight villages

In the attempt of indicating the first steps of intermodality as far as Italy is concerned, it is good to mention some of the documents which laid the foundations for the development of this issue at a national level. The first state approach to the idea of an intermodal network for transportation came in 1970 with the *Progetto 80*. Elaborated by the Italian Ministry for Budget and Economic Organization, this document presented some general suggestions for the improvement of the transportation system, such as the integration between modes of transport and a better mobility both for passengers and freights.²⁴⁸ The solution proposed was the creation of a series of specialized freights sorting centres close to transportation terminals which were located in strategic areas in terms of commercial utility. A special role was entrusted to Italian railways, which were supposed to arrange the good connection of those centres between them and to the rest of the national territory. Another of the important merits of this project has been the choice of a rigorously «*unified approach to planning*»²⁴⁹, thanks to which territorial organization and management finally became part of the national goals with regard to this theme.

However, notwithstanding the above mentioned exceptional importance of the *Progetto 80* for the development of an intermodal transportation network, the word *intermodalità* can be found for the first time only in the *1986 General Plan for*

²⁴⁷ Bennici M., La governance regionale dei porti italiani: la legge 84/94 e le sue proposte di riforma, in *Le istituzioni del Federalismo: rivista di studi giuridici e politici*, n. 1, 2006, p. 143

²⁴⁸ UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008, p. 8

²⁴⁹ Ministero delle Infrastrutture, *Dal Progetto 80 all'Italia che verrà*, reported by Archibugi F., Roma, 20 Febbraio 2007, p. 1

Transport. This is the first paper in which a real national program for the transport and logistics field can be recognised.²⁵⁰ Taking over from the *Progetto 80*, it focuses on some critical aspects such as the strategies to face the increasing traffic flows and the way to deal with national infrastructural weaknesses. Besides the first appearance of a term which will be then more than used in the following years, the main importance of that document lies in the solutions it introduces – which are transport corridors and freight villages – in order to reach the preset goals. The research for new transport routes, called corridors, was aimed both at making more efficient the links between some national areas and at avoiding the risk of saturation to which some commercial itineraries were subjected at that time.²⁵¹ Despite the fact that the majority of intermodal corridors the realization of which was considered possible are still to be designed or currently underway, the mere introduction of this concept into a plan for transports has permitted to go beyond the territorial fragmentation favouring a finally unified idea of the transportation system.²⁵² With regard to freight villages, they consist in geographically strategic areas in which logistic specialized structures are centralized and highly qualified services are offered. To be efficient they need to be located within crucial commercial routes and to be connected to the most important road, railway, port and airport intersections. In that sense, the *1986 General Plan for Transport* planned a very organised network formed by a limited number of most relevant junctions – first level freight villages – to which a wider series of secondary hubs was to be referred and connected.

According to the definition provided by OECD, a freight village – also called logistic centre – is *the geographical grouping of independent companies and bodies which are dealing with freight transport [...] and with accompanying services (for example storage, maintenance and repair), including at least a terminal*.²⁵³ Nowadays, and until the new bill on the field of freight villages is approved, the framework national law concerning the development of these strategic areas is the 240/1990 law. This is the document thanks to which the suggestions and projects presented by the 1986

²⁵⁰ UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008, p. 9

²⁵¹ Ibid., p. 9

²⁵² UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008, p. 9

²⁵³ OECD Glossary of Statistical Terms, see: <http://stats.oecd.org/glossary/detail.asp?ID=6254> (last accessed in June 2014)

General Plan were finally implemented.²⁵⁴ In fact, it provided for a five-years plan to be approved in order to create a well-balanced network of freight villages within the Italian territory. Recalling the idea of first and second-level intermodal centres which was proposed in 1986 and will remain until a new five-years plan was approved in 1993, this later document identified the location of new infrastructures close to the most traffic-congested commercial routes and the most important intermodal corridors as a key criteria for the definition of the transportation network.²⁵⁵ Named “urgent interventions concerning transport”, the 204/1995 law brought a substantial shift of these dispositions, specifying some additional requirements to which national freight villages must adapt. Among these, the essential service conditions and new qualifications requested for each of them in order to be subsidized by the State were listed.²⁵⁶

Those are only part of the many small or big transformations which have taken place over years, but it is not enough. Today, a renewal of the regulations on this subject is needed. To this end, a new bill called *Legge quadro in materia di interporti e di piattaforme logistiche territoriali*, and pushing for the renovation of the legal conditions for national freight villages has already been approved by the Italian Chamber of Deputies on April 12, 2012, and is now before the Senate.²⁵⁷ What UIR (Unione Interporti Riuniti) and the entire system expect from this new set of regulations is a complete innovation of the previous law provisions regarding logistic centres and their management. Among the main objectives of this proposal for the management of Italian logistic centres there are, in fact, the increase in the volume of traffic flows that those structures are able to welcome, the improvement of intermodal connections for freight transportation between Italy and the other European countries and, of course, the enhancement of Italian environmental performance in this field.²⁵⁸ As already mentioned above, the 240/1990 law had already pointed out the absolute need for the creation of an efficient network of

²⁵⁴ UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008, p. 10

²⁵⁵ See: http://www.cepimspa.it/siamo_1/universo_interporti.aspx (last accessed in June 2014)

²⁵⁶ Ibid.

²⁵⁷ See: <http://online.stradeeautostrade.it/articolo/000014020362001>, written by Fabio Quinto and published on February 3, 2014 (last accessed in June 2014)

²⁵⁸ See: <http://www.seareporter.it/news/approvata-la-legge-quadro-in-materia-di-interporti/> (last accessed in June 2014)

land ports where logistic services and transportation personnel were to be centralized in order to improve the quality of the service provided, optimize transportation costs and reduce freight delivery time. However, according to Fabio Quinto's article, Italy is now provided with a quite high number of freight villages, and for this the reason it becomes necessary to move towards the next step, which will be that of making them act together in the name of the national interest. The realization of a dense network of logistic structures, in fact, loses all meaning if it is not accompanied by a rigorous organization for their proper functioning. Furthermore, the distribution of these logistic centres within the Italian territory is far from being well-balanced, since in some regions there is a high concentration, whereas others result uncovered.²⁵⁹ The great majority of freight villages, in fact, is located in the North of Italy, where the leading position in relation to the volume of freight handled is to be attributed to Verona, in the North-East.²⁶⁰ With the exception of Campania, in Southern Italy the still scarce presence of inland logistic centres contributes to undermine the realization and development of an efficient network of connections between these structures at the national level.

Another problem of the Italian intermodal system, pointed out by Quinto, consists in the number of existing structures within the national territory which are improperly called freight villages without having the right to be named as such. Many logistic settlements aspire to be freight villages, but they are more similar to industrial areas than to logistic specialized centres, and this helps to create considerable confusion.²⁶¹ In order to prevent all these situations to happen, the new bill states a series of specific conditions that any freight village must have to operate in the national transportation network. According to Alessandro Ricci – president of UIR and of the Bologna freight village – once the new law comes into force, for all the logistic centers for which the Italian Ministry of Infrastructures and Transport will not identify the qualifications requested there will be two possibilities: either providing

²⁵⁹ See: <http://online.stradeeautostrade.it/articolo/000014020362001>, written by Fabio Quinto and published on February 3, 2014 (last accessed in June 2014)

²⁶⁰ CASSA DEPOSITI E PRESTITI, *Porti e logistica. Il sistema portuale e logistico italiano nel contesto competitivo euro-mediterraneo: potenzialità e presupposti per il rilancio*, Studio di settore n. 01, maggio 2012, p. 52

²⁶¹ See: <http://online.stradeeautostrade.it/articolo/000014020362001>, written by Fabio Quinto and published on February 3, 2014 (last accessed in June 2014)

themselves with the necessary requirements or ceasing to exist as freight villages.²⁶² Consequently, it is highly probable that the number of logistic centers will be reduced due to the lack of some important features such as, for example, the direct connection to the main national rail network, adequate custom services and business centers, or the presence of security systems for freight and the personnel in charge. Obviously this means that a great deal of public money will be saved into state coffers or allocated for other civil works considered more useful. It goes without saying that this new set of regulations, if approved, will result very useful not only to help resolve some deep-rooted matters within the national borders, but also to clarify Italian position towards the international market. To this end, also the *2001 General Plan for Transport and Logistics* was aimed at giving to freight villages an important function of promotion of Italian products at an international level. The most interesting aspect of this plan was the intention of guaranteeing the good working of the internal market flows, but with an innovative openness towards the international dimension, with the objective of using logistics to increase the foreign presence in the Mediterranean area.²⁶³ This document is based on new ideas looking at the evolution of world markets which can surely help understanding how to improve our national situation. In a press release of January 2013 in which the UIR appeals directly to the government, Alessandro Ricci, president of that association, has explained how the proper regulation of this matter could positively affect the growth of Italian GDP.²⁶⁴ He has discussed the importance of reaching an agreement on this subject by presenting a detailed report concerning Italian freight villages system in which there is clear evidence of the great growth potential of the national intermodal transportation network, especially concerning railways. What has emerged from this report is that our country is ready to compete with the economic upturn which will hopefully take place soon, and that our logistic centres are solid and proven structures already integrated in the territories they refer to.²⁶⁵ Therefore, for this reason, these settlements are ready to play an important role in the

²⁶² Ibid.

²⁶³ UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008, p. 13

²⁶⁴ See: <http://www.unioneinterportiriuniti.org/> (last accessed in June 2014), Press Release UIR al governo: *basta miopie sugli interporti*, 23 January 2013

²⁶⁵ Ibid.

international transportation system. It is essential that Italy continues to work in that direction in order to make further progress.

4.2 STRENGTHS AND WEAKNESSES OF THE ITALIAN PORT SYSTEM

4.2.1 Italy's geographical position is not enough

Any evaluation of the Italian current situation cannot leave the geographical position of our peninsula out of consideration. This point undoubtedly represents one of the greater strengths of the Italian port system, in particular after the Mediterranean basin regained its historical prominent role in international trade. However, unfortunately, too often in Italy local rivalries prevail over the national common interest, and this makes it difficult to formulate and follow a shared transportation policy that would give strong cohesion to the national port system and an added value that is not to be underestimated to the national economy. As stated by Massimo Deandreis, Director-General of SRM (Studi e Ricerche per il Mezzogiorno), in the last decades the gap between ports in the North and in the South of the country has grown even wider, as if they were two contrasting options not operating in the same port system.²⁶⁶ Again, this aspect introduces the fundamental issue of ports regional specialization, thanks to which a maritime country can offer a multitude of different services not concentrating them in the same port but taking advantage of the features of all ports belonging to its national network, entrusting to each the tasks and functions it is most prepared to perform. What Italian institutions are too often careless about is that ports with the same national belonging should collaborate in the name of the national income and the prosperity of the country, not be in opposition between each others. Local rivalries, de facto, contribute to weaken the competitive power of the country as a coherent unit, also compromising its reputation in the eyes of foreign investors, which, reasonably, prefer port systems that give a higher certainty of economic revenues to Italian fragmentation.

²⁶⁶ Deandreis M., *Come ripartire dai porti*, in *Il Sole 24 Ore*, 31 January 2014. Available at: <http://www.ilsole24ore.com/art/notizie/2014-01-31/come-ripartire-porti-064509.shtml?uuid=ABS9Ut> (last accessed in January 2015)

Under these circumstances, therefore, a question arises: has Italy accidentally forgotten the huge potential deriving from its central geographical position at the heart of the Mediterranean sea? Given that the geographic location is among the first parameters in terms of importance for the success or failure of a port, Italy has, de facto, the potentialities for aspiring to be the most prominent platform for freight transportation and containers handling in the Mediterranean basin. However, if a convenient position of the port is not accompanied by other features, which help to determine the efficiency of the whole transportation chain, shipping companies and international operators tend to prefer the quality of services provided to the geographical proximity to the main commercial routes. Apparently, this is exactly the case of Italian ports, that often are bypassed by big container ships, that tend to choose the longer route via the Northern Range instead of docking in the ports of our peninsula. As stated by Foschi, apart from its geographical position, the other factors which determine either the success or the failure of a port are both physical, including «*the distance from the route that directly crosses the Mediterranean from Suez to Gibraltar, the physical characteristics of each port, the depth of port waters, the length of the quays*»²⁶⁷, and technical, namely «*the technology and the intermodal infrastructures.*»²⁶⁸ Italy needs to realize that the parameters of international trade have changed in favour of the greater importance of logistics over geography, and should act accordingly and in the very near future.

Thanks to its favourable position in the heart of the Mediterranean basin, the Italian peninsula is also a fundamental intersection for the majority of multimodal corridors envisaged in the TEN-T program and that are expected to be fully implemented by 2050. Thus, Italy is potentially well placed to become the most relevant platform for freight transportation in the Mediterranean, and also in Europe, both in terms of operational capacity, thanks to the presence of a high number of ports along its coasts, and in terms of time-saving solutions for transport, in particular after the

²⁶⁷ Foschi Alga D., *The maritime container transport structure in the Mediterranean and Italy*, Discussion Papers del Dipartimento di Scienze Economiche – Università di Pisa, n.24, 2003, p. 8

²⁶⁸ Ibid., p. 8

reevaluation of the Suez-Gibraltar routing option in the second half of the twentieth century, extremely relevant for containers travelling along the East-West route.²⁶⁹

However, in spite of all these premises, the logistic inefficiency, the infrastructural inadequacy and the slowness of bureaucratic procedures cause to Italy the loss of a great percentage of the traffic flows that cross the Mediterranean sea on a daily basis. While the routing option via Northern Europe presents the negative implication of more days at sea, the excessive burden of bureaucracy in transportation procedures and the general inefficiency in port activities affecting the Italian port system implies between six and eight days more for the handling of a container if compared to the European average.²⁷⁰ Therefore, it is clear how the additional time invested in the navigation towards Northern European ports is somehow less than the time wasted both in dealing with too slow administrative procedures and in shifting from one mode of transport to another in presence of scarce and most of the times inadequate intermodal connections between port sites and the hinterland, as it happens when dealing with Italian ports. Hence, reasonably, transportation operators tend to rely more easily on the Northern European ports' predictability and compliance with the set timetables than on the widespread inefficiency of the Italian port system.²⁷¹ That said, what is even more surprising is the fact that this applies not only to big international shipping companies, but also to a considerable number of national enterprises, that choose foreign ports for the handling of national-labelled goods.

The maritime country that benefits from the probably best geographical position in the Mediterranean basin does not seem able to exploit this enormous advantage in order to take the leading role in the management of traffic flows coming to Europe from the booming economies of the Far East. The real problem lies in the resignation shown by the Italian port system to this situation of logistic impasse, which is maybe

²⁶⁹ Bergantino A.S. and Carnimeo N., *I porti in secca*, in *L'Italia presa sul serio*, LIMES – rivista italiana di geopolitica – n. 2, 2006, p. 226

²⁷⁰ Deandris M., *Come ripartire dai porti*, in *Il Sole 24 Ore*, 31 January 2014. Available at: <http://www.ilsole24ore.com/art/notizie/2014-01-31/come-ripartire-porti-064509.shtml?uuid=ABS9UUt> (last accessed in January 2015)

²⁷¹ De Forcade R., *Logistica e porti, «tassa» da 36 miliardi*, in *Il Sole 24 Ore*, 16 October 2013. Available at: <http://www.ilsole24ore.com/art/impresa-e-territori/2013-10-16/logistica-porti-tassa-miliardi-064456.shtml?uuid=AbRKdlul> (last accessed in January 2015)

the worst approach to adopt in the attempt to move forward from the economic standstill from which Italy is suffering in these latest years. In that sense, therefore, the geographical advantage of the Italian peninsula is not reflected by a relevant competitive advantage of our ports on the European and international stage.

4.2.2 A serious infrastructural delay

As it has already been said, in the world economy of today, in which markets are more and more accessible to an increasing number of actors, Italy cannot thoughtlessly rely only on its favourable geographical position which, so far, has been largely influential over its success as an important commercial player for the Mediterranean and Europe. Many new countries are entering the international arena, which is something that represents for Italy the materialization of the concrete risk of being marginalized to the mere transit function in the coming years. But why emerging economies should have more success than a country which can boast a long historic tradition in the maritime field, such as Italy? The answer is to be found in the fact that emerging countries are heavily investing in the infrastructural sector in order to adapt to the new trends of international trade, notably fast port operations and the increasing size of container ships. They have understood the importance of facilitating efficient intermodal connections and of providing customers with a multitude of services that go also beyond the merely traditional competences that a port used to have in the past. Nowadays, in fact, the competitiveness of the sector is not merely limited to the port site as such, but it depends also on the quality of intermodal linkages with the hinterland and on the type of services provided in inland ports, such as the storage of containers or the sorting and delivering of freight, which are organized and prepared for the last part of the supply chain, namely the journey to the final destinations. Thus, the tough struggle for competitiveness in the European scenario goes beyond the ports as such, since nowadays also inland logistic centres have a great part in determining the value added of a port system. De facto, port users are increasingly more attracted by the provision of additional services that go beyond the traditional loading and unloading

of container ships, such as the storage of freight or the organization of the so called *last mile*.²⁷²

For this reason, the need of a concrete policy for infrastructural development is becoming increasingly more pressing, because logistics serves little purpose without the support of an appropriate and up-to-date infrastructural endowment.²⁷³ It is necessary to find the financial, but also political, resources in order to connect Italy to the European transportation networks, so that the deep integration between transportation systems can bring to the achievement of the desired results. However, on this point, Italy has always stalled on the necessity of a radical reform of the port system, relying too much on the strength deriving from its strategic geographical position. Basically, our ports benefit from a tactically strong location and a very high know-how of their operators, but they lack the appropriate infrastructural endowment to demonstrate this skills at the international level. This represents a serious vicious circle from which Italy is struggling to get out. However, this seems like an odd situation, if considering that Italian ports have frequently been the recipients of generous investments by multinational corporations in the transportation field. Nevertheless, their infrastructural endowment is still backward and obsolete, not at all ready to deal with the new dimensions and challenging demands of intermodal transportation modalities. In those circumstances, it is not surprising that 500.000 containers filled with Italian products choose to route via the port of Rotterdam every year with the aim of avoiding a too complicated management of a port system that is no more answering to market demands.²⁷⁴

Italy suffers from the lack of decision-making processes, or better said, there have been a number of initiatives calling for the realization of new infrastructures aiming at the enhancement of intermodality and a series of proposals for the reform of the port subject, but, most of times, the ambitious projects planned have remained on paper due to internal conflicts between different authorities. Among the numerous

²⁷² CONFETRA (Confederazione Generale Italiana dei Trasporti e della Logistica), *La logistica italiana*, reported by the President Fausto Forti, annual meeting, Rome, 1 February 2011, p. 4

²⁷³ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.141

²⁷⁴ See: http://www.ilsecoloxix.it/p/economia/2014/12/07/ARemhGoC-promuoversi_maersk_italia.shtml (last accessed in January 2015)

evidences of this Italian delay are to be listed, for instance, the fact that today only 18 freight villages out of 29 that were supposed to provide a good national coverage in terms of logistic efficiency are effectively operating.²⁷⁵ Another example is to be found in the still scarce coordination between the North and the South of the country. According to data presented by the SRM annual report 2011, in fact, 70% of Italian ports are situated in the South, for quite obvious reasons related to the geographical structure of the peninsula, while the vast majority of transportation infrastructures are located in the centre-North regions.²⁷⁶ The problem of Southern Italy is that it continues to be focused more on the local dimension than on the projection towards the international arena. Yet, that area, in the framework of the Italian port system, could bring the greatest benefits to national growth, thanks to its location at the intersection between the major commercial routes that cross the Mediterranean basin. This lack of foresight not only undermines the national unity, but also proves costly to the country in terms of loss of both important market shares and competitive advantage over European competitors. The first step to take in order to transform the geographic advantage in considerable economic revenues for our country is to improve the accessibility to ports, both from the land and from the sea perspectives, and this will be possible only starting from the strengthening of infrastructures.

Unfortunately, the list of Italian problematic issues concerning the infrastructural endowment is longer than that, including also the rail network, that in some areas has reached the saturation level, resulting in bottlenecks, in particular close to national borders. Even the road network, whilst being quite vast if compared to European standards, is heavily congested in urban areas besides offering a poor-quality average service.²⁷⁷ However, despite these proven inefficiencies, the road continues to be the most used transportation modality, since often thinking about an alternative, even if it could bring some benefits, is more demanding than continuing to follow the habitual direction. What can be observed in the Italian approach to port

²⁷⁵ See: <http://87.241.54.226/interporti.html> (last accessed in January 2015)

²⁷⁶ SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011, p.142

²⁷⁷ *Ibid.* p. 174

reform and innovation in the broader sense is, in fact, a kind of reluctance to change, an unwillingness to improve an already compromised situation. This factor is alarming as it is the exact opposite of what Italy needs at the moment, that are strong and rapid interventions for the improvement of the situation in the transportation and maritime sectors. This, in fact, is, according to experts, the key for any future development of Italian economy. Our country is far behind in terms of infrastructures innovation if compared not only to the European average, but also to the emerging port systems located in the Southern shore of the Mediterranean, that, as already mentioned, are heavily investing in the optimization of this field. In Italy not only the funds allocated for public building projects are lower than in other European countries, but also they are most of times addressed to the emergency maintenance and requalification of already existing infrastructures rather than to the realization of new ones.²⁷⁸

What is taking form on the horizon, therefore, is more than alarming from the Italian perspective. Developing regions, such as North African countries, are expected to grow even further, together with the volume of global traffic flows, while the future of Italy, despite its geographical advantage and its long historic tradition in the maritime field, will be that of being marginalized from the main commercial routes, if this *non-intervention policy* in the infrastructural sector continues. Together with the modernization of infrastructures, the integration of Italian ports into European transportation networks depends as well on the optimization of the technological component. The communication between ports is essential for the provision of high value added services and, consequently, for the level of competitiveness of a port system²⁷⁹, since the more it results technologically interconnected with the network, the more it is efficient and reliable thanks to the constant monitoring of all phases involved in freight transportation. In this moment, which is characterized by a negative economic trend, it is more than ever necessary to optimize the scarce

²⁷⁸ CRESME, *Il mercato delle opere pubbliche in Italia*, final report, in UNIONCAMERE, *Lo stato dell'arte delle infrastrutture in Italia*, May 2008, p. 3

²⁷⁹ Lunghi L., *I porti italiani: lo stato dell'arte e le prospettive di sviluppo*, 27 November 2013 see: <http://www.contabilita-pubblica.it/2013/Varie/l%20porti.L.pdf> (last accessed in January 2015)

financial resources available addressing them to the projects with the most value added for Italian connectivity with respect to Europe.

4.2.3 Italian red tape

Already mentioned many times, it is worth focusing on one of the most serious handicaps of the Italian maritime sector, and of our national transportation field in general, namely the excessive burden of bureaucracy in the procedures for freight movement. The plurality of subjects involved in the supply chain creates confusion in the freight delivery process, because the separation of tasks is not sufficiently clear and their execution is inefficient and too slow compared to the European average. This bureaucratic complexity results in the Italian loss of important market shares in favor of other countries that face the Mediterranean basin and are heavily investing in the renovation of their infrastructural endowment. However, this is not the only problem caused to Italian economy by its red tape: the uncertainty concerning delivery times and the lack of a standardized set of procedures for freight transportation contribute to weaken the international appeal of Italy in the view of foreign investors. In such circumstances, in fact, they prefer to invest in port systems that offer greater certainty concerning both time and costs of distribution procedures and that provide a higher market protection. The problem is that Italy would really need these investments in order to realize the ambitious infrastructural and ICT programmes which are still on paper, since the scarce availability of public funds make Italy to be at the mercy of private investors in the sector. Now more than ever, national and local initiatives have to be deeply coordinated not only to avoid useless redundancies and interferences between different authorities, but also not to waste precious financial resources in projects that are not among the national priorities.²⁸⁰ The multitude of regulations in force in Italy and the excessive number of actors involved in the bureaucratic *iter* make it difficult to encourage international investors to put money in an environment which do not facilitate the rooting of new

²⁸⁰ CNEL(Consiglio Nazionale dell'Economia e del Lavoro), *Gli investimenti diretti esteri in entrata e in uscita dall'Italia*, Osservazioni e Proposte, April 2002, p. 13

businesses within its national territory. Furthermore, the overabundance of laws needs to be simplified and the ever changing administrative and legislative context needs to be re-thought in the direction of a defense both of the investment and of the investor, since the situation as it is today undoubtedly undermines the credibility and the competitive position of Italy on the international stage.

To sum up, what prevents Italy to be the greatest hub in the Mediterranean is the lack of clarity, which is easily observable in a long series of aspect characterizing the Italian situation. Among them are to be listed: the outdated political orientation towards the port subject (law 84/94), the confused separation of tasks between local and national authorities, the too many public and private actors involved in the planning, coordination and implementation of port activities, the multitude of governmental models that are different from port to port, the only partial autonomy accorded to Port Authorities and, not least, the uncertainty of the legislative framework which largely contributes to reduce the attractiveness of the national port system in the view of international investors. Many proposals have been made for the improvement of these critical points and for the revaluation of the Italian peninsula starting from the huge competitive advantage deriving from its strategic geographical position. According to the analysis carried out by Ambrosetti for the relaunch of the Italian port industry, for instance, the plan for action needs to better coordinate the forces at play identifying a limited number of ports of national interest and re-defining the role of Port Authorities in those ports in order to simplify the administrative apparatus.²⁸¹ Then, it is necessary to act in the direction of a considerable reduction of the time needed for the approval of port master plans, with a view to a greater coordination between actors and to the guarantee of a less risky environment for foreign investors. Given that a considerable percentage of international trade passes through ports, Italy has a great opportunity to seize, thanks to its geographical structure and the huge number of operative ports that over years have arisen alongside its shores. Any future development for the Italian

²⁸¹ The European House – Ambrosetti, *Il rilancio della portualità e della logistica italiana come leva strategica per la crescita e la competitività del Paese. Documento di indirizzo strategico*, research promoted by Assoport, Fedespedi and Federangenti, 18 June 2013, p. 31

ports system, therefore, will have to follow precise guidelines for the reform of port policies and the modernization of infrastructures, in order to increase competitiveness on the European and international level. The figure below clearly summarizes the problems that still affect the Italian port industry and that need to be overcome in the view of a considerable growth of our national economy.



Figure 15: Main weaknesses of the Italian port system (source: SRM, *Trasporto marittimo e sviluppo economico. Scenari internazionali, analisi del traffico e prospettive di crescita*, Giannini Editore, Naples, 2012, p. 33)

After this brief analysis of the Italian current situation with regard to the inadequacy of infrastructures, the marginalization of our country from the main commercial routes would be highly understandable. And, even better, why do big shipping companies and international transport operators find our country as an attractive place to invest their money?²⁸² This time, the geographical centrality and the huge acknowledged potential for improvement are not enough to save Italy from being only a spectator in commercial exchanges between Europe and the far East. In the words of Fausto Forti, former President of Confetra, «*sarebbe imperdonabile che il nostro Paese, avendo gli uomini, le idee e la consapevolezza della posta in gioco, non facesse tutto quanto è necessario per il bene nostro e delle future generazioni.*»²⁸³

²⁸² Bergantino A.S. and Carnimeo N., *I porti in secca*, in *L'Italia presa sul serio*, LIMES – rivista italiana di geopolitica – n. 2, 2006, p. 227

²⁸³ CONFETRA (Confederazione Generale Italiana dei Trasporti e della Logistica), *La logistica italiana*, reported by the President Fausto Forti, annual meeting, Rome, 1 February 2011, p. 14

4.3 THE CALL FOR ACTION: SOME OPPORTUNITIES NOT TO BE MISSED

4.3.1 The Rhine-Alpine corridor

The success of the Northern Range port system, and of the Netherlands in particular, has been determined by its experience and know how in the maritime sector, its centuries-old dependence on trade and, not least, the presence of a very good infrastructural endowment.²⁸⁴ All these features can be found in the Northern seaports of The Netherlands and Belgium that are involved in the Rhine-Alpine corridor, an infrastructural project that stretches from those ports in Northern Europe to the port of Genoa in the Mediterranean basin. The port of Rotterdam in particular, which is one of the major port systems of Northern Europe, both for size and for the amount of freight handled, is undergoing important structural changes. In fact, following the advent of containerization and the emergence of new trends in freight transportation in the second half of the twentieth century, this port has expanded in order to adapt to new market demands, in particular towards the hinterland, creating logistics complexes directly connected both to the port and to intermodal networks for the fast delivery of incoming cargos. These inland structures, besides increasing considerably the capacity of their respective terminals and supplying broader spaces for the storage of goods, provide a wide range of value added services aiming at meeting users' ever more demanding needs and requests. The port of Rotterdam is constantly evolving, investing in the modernization of its infrastructures and in increasingly more advanced communication technologies, in order to facilitate and accelerate the transportation process. For a port, to adapt to the new trends of the market implies, for instance, to arrange for the development of new infrastructures that would enhance the accessibility to the port, such as the deepening of waters in order to facilitate the docking of ever bigger container ships. This is exactly what ports of the Northern Range, including Rotterdam, are doing. Thus, keeping pace with innovations in the maritime sector and, more in general, in

²⁸⁴ UNITED NATIONS, *Commercial Development of Regional Ports as Logistic Centres*, New York, 2003, p. 41

the transportation field is at the same time the strength of Northern European port systems and the weakness of Mediterranean ports, Italy in particular. Taking here the port of Genoa into consideration, it is true that it is one of the greatest ports in the Italian ports system, but it still needs to strengthen services provision in order to support the growth and modernization of the infrastructural sector. Despite the fact that also this port, similarly to the other Italian maritime terminals, has always been highly focused on the local dimension more than on going beyond national borders, in the last decades, it has shown a sort of international projection that raises national hopes for a considerable future development.²⁸⁵ In the framework of the TEN-T Program, and taking into consideration this openness to European markets demonstrated by the port of Genoa, the Rhine-Alpine corridor – which was formerly known as the Genoa-Rotterdam corridor – is one of the most interesting for an Italian economic relaunch that, in the view of many experts, should start from the port industry. This corridor has been projected between two strong maritime realities such as the second major Italian port, which has been overtaken by Trieste in 2013²⁸⁶, and the greatest European port, thanks to its continuous expansion in size and technical evolution. As can be seen in the figure below, the Rhine-Alpine corridor crosses four Member States (Italy, Czech Republic, Germany and the Netherlands) and is also known as the *Corridor of the two seas*²⁸⁷, since it connects the most lively ports of the North Sea and of the North-Western area of the Mediterranean Sea.

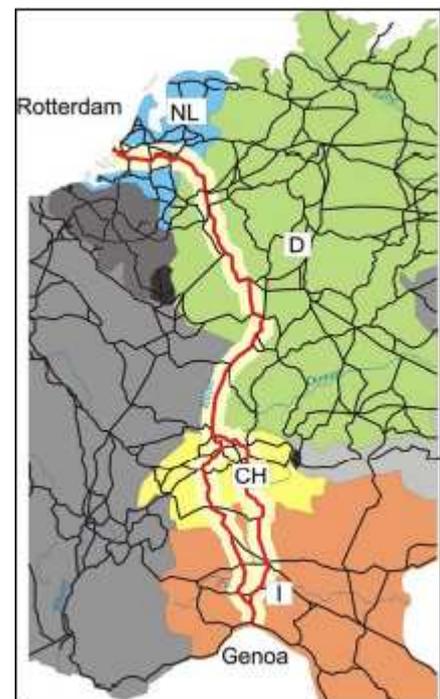


Figure 16: The Rhine-Alpine corridor (source: Terminal the Freight Corridor Rotterdam-Genoa, September 2008, p. 7)

²⁸⁵ SRM, Sintesi della ricerca *Trasporto marittimo e sviluppo economico. Scenari internazionali, analisi del traffico e prospettive di crescita*, Naples, 2012, p. 12

²⁸⁶ See: <http://www.corriere.it/economia/14-febbraio-10/trieste-prim-porto-italiano-supera-genova-2013-volume-merci-aumentato-15percento-a4906fe2-927e-11e3-b1fa-414d85bd308d.shtml> (last accessed in January 2015)

²⁸⁷ FONDAZIONE PER LO SVILUPPO SOSTENIBILE, *Genova-Rotterdam: un corridoio sostenibile*, Rome, October 2012

The importance of this project is not only geographical, but lies in its sustainable aim, since the main objective of the corridor is to transfer a considerable percentage of traffic from the road to the rail transportation modality, thus improving the environmental performance of one of the most traffic congested areas in Europe.

According to data reported by Otinordovest (Osservatorio Territoriale Infrastrutture) in December 2013, in fact, 75% of freight transportation along this corridor is implemented through the road modality and, at this regard, the primary objective of the European Union is to strengthen the railway network so that its capacity would be doubled by 2020.²⁸⁸ Thanks to its great potential in connecting some of the most important nodes of European commercial activity, the Rhine-Alpine corridor was introduced among the nine strategic corridors of the so called *TEN-T core network*, which is expected to give to Europe a full intermodal coverage by 2030. The advantages related to the realization of this project are double-sided, since for Italy it represents a great opportunity to have preferential access to the big markets of Northern and Central Europe, while for the Netherlands Genoa constitutes a strategic gateway towards the huge amount of freight coming from the Far East and the Southern Mediterranean.²⁸⁹ The Rhine-Alpine corridor is perfectly in line both with the expected increase in the volume of traffic flows, that will be mainly due to the further growth of developing countries in the East of the world but also in the Southern shore of the Mediterranean basin, and with the European objectives concerning sustainability. The European Community, in fact, is strongly encouraging the realization of an efficient network of links, both physical and technological, but always bearing in mind the priority importance of the environmental respect. The implementation of Trans-European Networks will considerably contribute to the reduction of the negative impact of the transportation sector on the environment, so, as a consequence, also the Rhine-Alpine rail corridor is supposed to act in the same direction. However, the great potential incidental to the shift from the road transport to the rail modality consists not only in a strong push towards a more

²⁸⁸ Otinordovest, *Corridoio Reno-Alpi (ex Corridoio 6 Genova-Rotterdam)*, December 2013

²⁸⁹ FONDAZIONE PER LO SVILUPPO SOSTENIBILE, *Genova-Rotterdam: un corridoio sostenibile*, Rome, October 2012, p. 18

sustainable European transportation system, but also in an overall reduction of congestion along the most active European road intersections. The Rhine-Alpine corridor, therefore, will have extremely positive implications on the national and on the whole European transportation networks, but the substantial difference between those two systems lies in the provision of infrastructures and services. As a matter of fact, a further development of the infrastructural endowment, if not accompanied by the adequacy of the services provided within those infrastructures, is somewhat a waste of time. In Italy, therefore, the starting point should be that of realizing that these two components of the transportation industry are equally important and have to be developed in the most coherent way available. And, if this will be the case, then it makes sense to talk about a logistic project such as the Rhine-Alpine corridor in terms of an innovation that will similarly benefit both Italy and all the other European states that are involved in it. Otherwise, only the side in which the quality of the services provided is adequate to the corresponding infrastructural endowment will have the opportunity to take advantage of the situation and make the most of the implementation of that project. Generally speaking, the major European sections of the corridor are either in their planning phase or to be completed between 2017 and 2020.²⁹⁰

As far as the Italian side is concerned, the situation is made more difficult by the presence of the Alps, which represent a natural barrier that need to be overcome in order to cross national borders and reach continental Europe through the rail modality. Nevertheless, the many infrastructural interventions needed have been debated and classified depending on their importance for the final implementation of the corridor. Again, the major concern of the Italian situation are the financial resources, therefore the scarce public funds available have been allocated for the priority projects, namely for the upgrading of the most strategic railway axis and the strengthening of Ligurian ports.²⁹¹ Thus, as is often the case in these circumstances, the majority of national projects involved in the realization of the Rhine-Alpine

²⁹⁰ Otinordovest, *Corridoio Reno-Alpi (ex Corridoio 6 Genova-Rotterdam)*, December 2013

²⁹¹ FONDAZIONE PER LO SVILUPPO SOSTENIBILE, *Genova-Rotterdam: un corridoio sostenibile*, Rome, October 2012, p. 52

corridor is either at the first stages of implementation or still in search of subsidies that would finance such interventions. According to the esteems of Otinordovest, also on the Italian side the infrastructural works foreseen by this strategic European project should be completed by 2020, or Italy risks not only to lose all credibility and competitiveness if compared to Northern range ports, but also will be penalized at the national level.²⁹² This is because, given that the rail system is the infrastructure thanks to which it will be possible for Europe to cope with the increasing volumes of international traffic flows, it needs to be efficient from North to South, without weak areas. Otherwise, if the last section, namely the Italian portion, is not competitively efficient and provided with advanced technological systems, this will prevent Ligurian ports from facing European markets and will only increase the already existing perception of Italy as a country at the mercy of European industrial giants.²⁹³

4.3.2 The Baltic-Adriatic corridor

As a result of the eastward shift of the European centre of gravity following the unprecedented growth of Eastern economies, ports situated in the Adriatic and in the Baltic sea have regained strategic importance in the international scene. The proposal for the realization of an intermodal corridor connecting the ports of these two regions came out in 2006, when it became clear that the presence of efficient and fast links for freight transportation from North to South, and vice versa, would have brought benefits on both sides. Like the advantages deriving from the above mentioned Rhine-Alpine corridor are double-sided, the same applies also to the Baltic-Adriatic corridor, in the sense that Adriatic ports such as Venice, Trieste and Koper would benefit from an efficient connection with Central-European markets, while ports facing the Baltic sea, such as Danzig, would gain from an easier access to the Mediterranean basin.²⁹⁴ As Sellari has pointed out, in fact, the realization of a

²⁹² Otinordovest, *Corridoio Reno-Alpi (ex Corridoio 6 Genova-Rotterdam)*, December 2013

²⁹³ Ibid.

²⁹⁴ Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013, p. 40

communication channel between the Adriatic and the Baltic is of paramount importance in order to «*far sì che l'Adriatico sia realmente un sistema e non un mosaico, un patchwork di strutture, anche socio-economiche, avulse da un contesto integrato.*»²⁹⁵ Basically, the fact of organizing a multitude of individual nodes with a local relevance into an integrated system is the key for the prosperity of each of them. As shown by the figure below, the Baltic-Adriatic rail corridor crosses five Member States (Italy, Austria, Czech Republic, Slovakia and Poland) and has a great potential for the creation of an easier and faster network for the transportation of goods. Given that the improvement of European cohesion is among the priorities for the near future, the efficient connection between Northern and Southern basins would undoubtedly bring an important value added to the development of this issue.



Figure 17: The Baltic-Adriatic corridor (source: <http://www.baltic-adriatic.eu/>, last accessed in January 2015)

²⁹⁵ Ibid., p. 40

Similarly to the Rhine-Alpine corridor, also the intermodal connection between Baltic and Adriatic ports has been considered a priority project for the improvement of European connectivity, to the point that it has been introduced among the nine corridors shaping the *core network* in the framework of the TEN-T Program. As far as Italy is concerned, the great value added of this project lies in the fact that if it will prove to be efficient, once completed it will constitute a valid alternative to the route via the Northern range ports for freight coming from the Mediterranean and from the East.²⁹⁶ Once this corridor will be fully implemented, in fact, those incoming goods will have direct access to the main markets of continental Europe and, as it is well known, the fact of docking in Italy will save to international shipping companies precious days of navigation, that obviously result in time and costs savings.

Again, thanks to its favorable geographical position, Italy can play a prominent role in the establishment of this corridor, focusing on the port of Trieste in particular.²⁹⁷ According to the analysis made by Paolini²⁹⁸, to prevent Baltic ports from choosing other routes that do not directly involve Italy in order to reach the Mediterranean sea, it is necessary that our country encourages some forms of cooperation with that region, with a view to the formulation of a shared strategy that would benefit both port areas. The implementation of this corridor can be the first step in that direction, and Italy must not miss the precious opportunity to be the unique gateway for Baltic ports to reach the Mediterranean basin. In this sense, in fact, Italian port industry should take advantage of the geographical factor and act towards a useful cooperation with Baltic ports, not only as far as a facilitation of commercial exchanges is concerned, but also in the broader sense of the term, that includes, for instance, tourism and the movement of people between the two ends of the corridor. What should be established between Adriatic and Baltic ports, therefore, does not concern only trade relations and an agreement on tariffs, but it is also a cultural link, as well as a dense information exchange between Northern and Southern institutions, since also these components can contribute to the economic

²⁹⁶ See: http://www.ansa.it/nuova_europa/it/notizie/rubriche/speciali/2013/06/24/Progetto-Batco-corridoio-Baltico-Adriatico_8921309.html (last accessed in January 2015)

²⁹⁷ Paolini M., *Adriatico-Baltico, un asse che serve all'Italia*, in *L'Italia presa sul serio*, LIMES – rivista italiana di geopolitica – n. 2, 2006, p. 252

²⁹⁸ *Ibid.*, p. 253

growth and prosperity of Europe. In the words of Kurt Bodewig, the European Coordinator for the Baltic-Adriatic corridor, the social and political value of the project, in addition of the obvious commercial one, appears clear:

«The Baltic-Adriatic corridor is much more than the mere transport infrastructure. It adds European value to the infrastructure investments, it enhances cross-border and interregional cooperation and thereby aims at coordinated approaches and implementation. Last but not least the corridor constitutes a powerful tool to bring relevant stakeholders across countries and sectors together in order to pave the way for a living corridor environment.»²⁹⁹

At present, infrastructural works are in progress along the whole corridor, and the main missing links are those between Italy and Austria, in proximity of the Alpine crossing³⁰⁰, which represents a serious natural obstacle that needs to be overcome in order to eliminate bottlenecks and make freight transportation faster and smoother. Interventions on that section have already been planned, but what is primarily needed is a more coordinated approach to the matter on both sides of the borders³⁰¹, given the critical nature of the interventions required and the scarcity of public financial resources.

²⁹⁹ EUROPEAN COMMISSION, *Core Network Corridors. Progress report of the European coordinators*, September 2014, p. 21

³⁰⁰ *Ibid.*, p. 18-19

³⁰¹ *Ibid.*, p. 19

4.3.3 NAPA: an association promoting the Northern Adriatic

The Northern-Adriatic region is situated, de facto, on the shortest line between Europe and the Far East, and this condition represents a remarkable geographical advantage for the competitiveness of the area. Obviously, a further development of North-Adriatic ports in terms of efficiency in transportation activities and services provided, and the enhancement of intermodal connections with the hinterland, would be a great benefit also for Europe as a whole, since the lively markets that lie behind the North-Adriatic region would have an extra access to the Mediterranean basin.³⁰² Thus, apparently, ports located in the North-Adriatic are faced with a series of conditions that would work in favor of their indisputable success over their competitors, among which there are the eastward shift of the European commercial centre of gravity, the prominent role of Eastern economies in international trade and the considerable growth of Southern-Mediterranean markets, besides the central geographic position, of course. However, the success of ports in the North Adriatic will depend on their inclination towards some forms of association and cooperation that would make it possible for them to compete with Northern Range ports, that are continuing to record the biggest amount of containers handled. North-Adriatic ports must aim at managing to *«sustain a volume of traffic – in the ports and in land distribution – high enough to generate sufficient economies of scale to convince big shipping to ascend the Adriatic and the major European logistics operators to make the North Adriatic their continental port base.»*³⁰³

An interesting approach in this sense is the NAPA (North Adriatic Ports Association), which stems from a regional agreement between five seaports – Ravenna (that then left the NAPA in 2013), Venice, Trieste, Koper and Rijeka – belonging to three European States – Italy, Slovenia and Croatia.³⁰⁴ The association was established in 2010, from the attempt of the former president of the port of Ravenna, Giuseppe Parrello³⁰⁵, to create a collaboration between Northern-Adriatic ports in order to maintain their competitive position as opposed to the Northern European ports, but

³⁰² Costa P. and Maresca M., *The European future of the Italian port system*, Venice, Marsilio Editori, first edition: December 2013, p. 217

³⁰³ Ibid., p. 220

³⁰⁴ Ibid., p. 230

³⁰⁵ Ibid., p. 249

being organized as a system, instead of competing with each other trying to increase their own throughput. NAPA is based on the awareness, shared by all those ports, of their inadequacy, if taken individually, in competing with the commercial giants in Northern Europe.

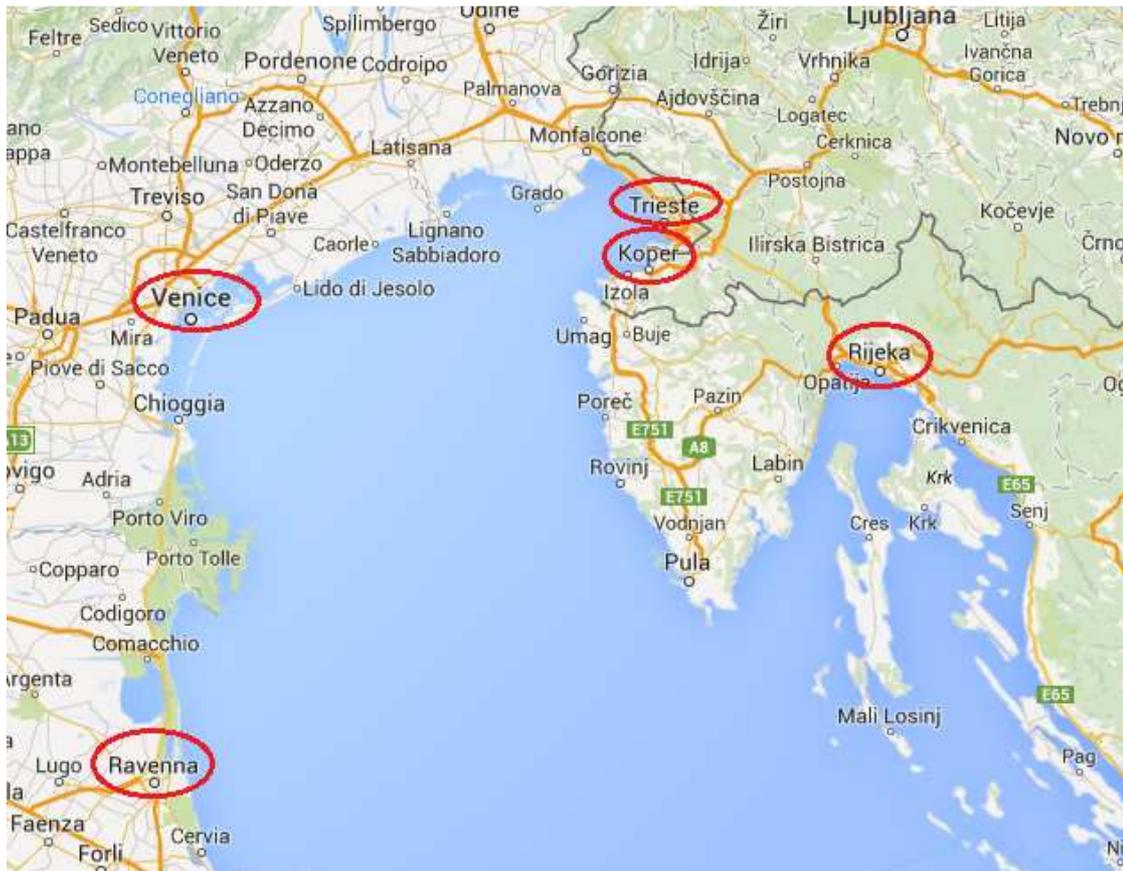


Figure 18: Ports of NAPA

The aim of NAPA is to be recognized by the European Union and by international operators as a single port, with the belief that *«in the medium-long term – precisely that of port development – the success of one port is the success of all the others»*³⁰⁶, since the NAPA as a system is much more efficient than a patchwork of ports that act individually, each one in the sake of its own interests. This, of course, improves the competitive position of Northern-Adriatic ports among their European and international competitors, contributing to attract both shipping companies and foreign investors. Since its creation five years ago, the issues this association has dealt with have been those concerning the connection of Northern-Adriatic ports

³⁰⁶ Ibid., p. 251

with their hinterlands, the efficiency of port operations in the European framework of the TEN-T program and the *Motorways of the Sea* project, ICT technologies applied to the port sector, the security and environmental issues in port sites.³⁰⁷ But, besides the infrastructural aspect, ports of NAPA have also worked towards the realization of a shared communication platform, encouraging the integration between the computer systems of each member and facilitating the exchange of information within the community. NAPA, therefore, represents a very interesting attempt of organization on a regional base, in which cooperation and shared sovereignty between members are encouraged, while individuality is abandoned. Because of factors such as the lack of wide spaces in ports that would make it possible the storage of containers as well as other value added services, the infrastructural limits of the Italian port system, the presence of weak and confused road and especially rail connections with the hinterland and the uncertainty of time and costs due to widespread inefficiencies, ports of NAPA could represent an attractive alternative to Northern Range ports only clustering together, since all these conditions cannot be satisfied in none of North-Adriatic ports taken individually. In the words of Costa, «*North Adriatic ports either win together or all lose.*»³⁰⁸

Total throughput of cargo in million of tonnes, 2013:

Rotterdam	440.0
Antwerp	190.9
Hamburg	139.0
NAPA Ports	108.0
Marseille	80.0
Bremen	78.8
Zeebrugge	43.0

Figure 19: Comparison between main European ports – total throughput of cargo.

Source: <http://www.portsofnapa.com/about-napa> (last accessed in January 2015)

³⁰⁷ Ibid., p. 251

³⁰⁸ Ibid., p. 224

As it can be seen in the figure above, in fact, the multi-port system of the North-Adriatic plays a prominent role at the European level, since, even if it cannot compete with the annual throughput of the port of Rotterdam, its amount of cargo handled is closer to that of two other big North European ports, namely Antwerp and Hamburg. However, as can be seen in the figure below, the same cannot be said for container traffic, for the handling of which the ports of NAPA still have an inadequate infrastructural endowment that do not answer to the new trends in container transportation. Basically, they are not ready for welcoming the huge new generation container ships (the biggest among them carry 12.000 TEU), and are interested only by medium-size container ships, carrying 8.000 TEU.³⁰⁹

Comparison of Container Traffic in million TEUs, 2013:

Rotterdam	11.6
Hamburg	9.3
Antwerp	8.6
Bremen	5.8
Zeebrugge	1.9
NAPA Ports	1.6
Marseille	1.1

Figure 20: Comparison between main European ports – container traffic

Source: <http://www.portsofnapa.com/about-napa> (last accessed in January 2015)

Moreover, considering that three out of nine TEN-T core network corridors merge in the North-Adriatic region, if this area does not meet the development conditions needed to enhance its competitive position at the European and international level, it will have great difficulties in defending itself from a major penetration of Northern European ports in Mediterranean traffics. As a matter of fact, if North-Adriatic ports do not take advantage of their favorable position and their involvement in some of the most important European corridors, Northern European ports will undoubtedly exploit the situation increasing their engagement in the Mediterranean basin.³¹⁰ Ports facing the North-Adriatic, as well as the Italian port system in general, have to focus on a massive infrastructural modernization, but accompanying it in parallel

³⁰⁹ Ibid., p. 220-221

³¹⁰ Ibid., p. 229

with a considerable improvement of port services provided. Otherwise, foreign port systems, that are more efficient, more prepared to handle big volumes of traffic flows and better organized, will exploit Italian infrastructures to increase their total throughput, and Italy would not gain nothing from this situation.

All things considered, this experiment has been quite successful, in particular in having managed to be recognized by European institutions as a multi-port entity acting as a single body, and in having obtained a voice in Europe in illustrating the objectives of the association and the means available to reach them.³¹¹ This has brought other port systems in Europe presenting features that are similar to Northern-Adriatic ports to adopt the same model of multi-port association.

³¹¹ *Ibid.*, p. 254

CONCLUSION

Contemporary world has been undergoing unprecedented changes in economic, political and structural terms. In the specific field of interest of this dissertation, namely freight intermodal transportation, with a particular focus on ports, these components are deeply interconnected, to the point that their combination heavily influences either the success or the failure of port systems worldwide.

The competitiveness of a port in the international commercial scenario is today increasingly more dependent on the adaptability of those structures to the global changing situation. New forms of cooperation are emerging in the more and more globalized and interconnected world we are living into, but to take a step forward means trying to understand the reasons that lie behind these attempts towards a further integration between port systems at the European as well as at the international level. This is the objective that the present dissertation has tried to achieve, approaching the subject of intermodal freight transportation and presenting it in reference to the European framework. By their nature, ports act as vital gateways between the sea and the land, therefore between the maritime transportation modality and inland rail and road connections. However, their great potential still remains largely unexploited, especially in Southern Europe that, notwithstanding the high concentration of ports along its shores and its favorable position with respect to the strategic commercial route Suez – Gibraltar, is engaged in a tough competition with emerging powers belonging to the same maritime area. A big geographical advantage that, however, Southern European ports do not manage to transform into a meaningful economic benefit. The gap that has been taking form between the Mediterranean and the Northern Range port systems mainly concerns efficiency, infrastructural endowment, services provision and the volume of traffic flows handled, which are all aspects that work in favor of the latter. The easier accessibility to the globalized world economy and the consequent facilitated access of a multitude of minor actors into the international market, has led shipping companies to have a wider range of possibilities in the choice of the route to follow for freight transportation. Ports, therefore, have to act in the attempt

of taking part in the main commercial routes, but being aware that either their gain or loss of international market shares will depend not only on the nature and extent of their interventions, but also on the commercial decisions taken by international operators. So, apparently, ports are no more architects of their own destiny, both because of their growing need for private investments and because of the mechanisms that lie behind the new trends and logics of the international market. Thus, today ports are in the critical position of being forced to act towards infrastructural modernization and political reform, but without having the guarantee that those interventions will secure their prominent role in international relations and in the geography of traffic flows. This is one of the important global changes brought in by globalization.

Since 1980s, the extraordinary economic growth undertaken by Eastern economies, together with the reopening of the Suez Canal occurred in 1975 following the oil shock in 1973, has brought the Mediterranean basin once again at the centre of the main international commercial routes. Due to their strategic position, which still is of paramount importance for a facilitated access to the lively markets of continental Europe, Mediterranean ports have thus regained international relevance. However, not the totality of them have been able to take advantage of the positive implications presented by this favorable situation, and Italy, unfortunately, is a good example of this. The eastward shift of production centers which has occurred in the last decades of the past century has brought Mediterranean ports to develop at a greater growth rate if compared to Northern European terminals, but their infrastructural inadequacy, insufficiency of connections with the hinterland and confusing administrative system have caused a general tendency by international shipping companies to route their cargos via Northern Europe, essentially bypassing Mediterranean ports. However, recently the basin has regained international relevance with the emergence of new cost-effective port systems, such as the colossal infrastructures of Port Said (Egypt) or Tanger Med (Morocco), strategically situated in proximity of the two points of access in the Mediterranean, respectively in the East and in the West. Of course, that has brought new glory to this geographical region, but the interests of foreign investors and international transport

operators are concentrated on the relatively new Southern-shore port systems that, notwithstanding their political instability, offer more guarantees and favorable conditions such as an adequate infrastructural endowment, the provision of value added services, low prices for port operations, wide empty spaces for the handling and storage of containers, and great accessibility to the port. On the contrary, countries such as Italy have missed this precious opportunity to improve their position in the transportation sector and to play a prominent role as logistic platform in the middle of the most important commercial routes. Italian competitors in the Mediterranean are heavily investing in infrastructural modernization, such as the construction of highways and railways for the support of port activities and in interventions aimed at improving the accessibility to the port for huge container ships, increasing in this way their international visibility, and thus becoming even more attractive for foreign investments in the field. Unfortunately, as chapter four has explained, this is not what Italy is doing at the moment, because of a range of factors, among which there are the difficult economic situation that makes it unlikely to allocate the huge sums of money needed for infrastructural renovation and the existing internal administrative conflicts between Port Authorities, since each one of them is trying to keep sovereignty over its adjoining territory. To summarize them in only one concept, Italy suffers of lack of foresight, which makes the problem of the Italian port system to be undoubtedly economic, but also governmental and political. The position of Italian ports in this framework is, therefore, critical, since they have a great potential for improvement, but they lack the administrative and financial means to achieve important results in the direction of an accurate reform of the law 84/94, a considerable renovation of port structures and a decisive enhancement of connectivity both within national borders and with continental markets. The last call for Italy to stay in the European game comes from the ambitious mobility projects involving Member States for the realization of a dense network of sea and land connections aiming at enhancing connectivity and reducing the existing gap between the North and the South of the continent. Again, Italian ports, especially those located in the North Adriatic and in the North Tyrrhenian, constitute important nodes of the trans-European corridors shaping the so called *core network*, which is

expected to connect the most strategically important ports, airports road and rail junctions by 2030.

To conclude, it is very difficult to forecast in which direction any future development of the Italian port system will go, but what is certain is that inaction cannot, in any way, be listed among the possible options to leave behind the current critical situation. In fact, given that it is strongly believed that the volume of traffic flows will continue to increase in coming years – according to some estimates reported by the European Commission it is expected to rise by 50% by 2030³¹² – it is very unlikely that Italy will be able to extend its consumer base in the sense of welcoming a greater amount of freight within its ports, if the approach that has been adopted until now will not change. Considering that, hopefully, the incidence of maritime transportation will increase in the years to come, and that by 2015 some ships are expected to reach the capacity of 18.000 TEUs³¹³, Italian ports need to intervene decisively for the implementation of structural adjustments if they do not want to be sidelined by the port systems that are emerging in the Mediterranean basin.

³¹² EUROPEAN COMMISSION, European ports: an engine for growth.
Available at: http://ec.europa.eu/transport/modes/maritime/infographics_en.htm (last accessed in January 2015)

³¹³ Ibid.

BIBLIOGRAPHY

Bennici M., La governance regionale dei porti italiani: la legge 84/94 e le sue proposte di riforma, in *Le istituzioni del Federalismo: rivista di studi giuridici e politici*, n. 1, 2006.

Beretta E., Dalle Vacche A. and Migliardi A., *Il sistema portuale italiano: un'indagine sui fattori di competitività e di sviluppo*, Occasional Papers, n.39, Banca d'Italia, Eurosystem, 2009.

Bergantino A.S. and Carnimeo N., *I porti in secca*, in *L'Italia presa sul serio*, LIMES – rivista italiana di geopolitica – n. 2, 2006.

Bregolat Obiols E., *New Actors in Mediterranean Policies. China's Influence in the Mediterranean*, iemed (Institut Europeu de la Mediterrania), 2010.

Buonfanti A., *Lo shipping e la portualità nel Mediterraneo: opportunità e sfide per l'Italia*, rivista di economia e politica dei trasporti, n. 3, 2013.

Buono F. and Soriani S., *Mare/Sea*, in Giaccaria P., Paradiso M., *Mediterranean Lexicon, Lessico Mediterraneo*. Società Geografica Italiana, Roma, 2012.

CASSA DEPOSITI E PRESTITI, *Porti e logistica. Il sistema portuale e logistico italiano nel contesto competitivo euro-mediterraneo: potenzialità e presupposti per il rilancio*, Studio di settore n. 01, maggio 2012.

Cazzaniga Francesetti D., *Italian versus Northern Range port competitiveness: a transportation cost analysis in Chinese trade*, in *European Transport* n. 30, 2005.

Cazzaniga Francesetti D. and Foschi A. D., *Mediterranean versus Northern Range Ports. Why do Italian containers still prefer routing via the Northern Range Ports? Advice for a new policy*, IAME (International Association of Maritime Economists), Panama, 2002.

Cazzaniga Francesetti D. and Foschi Alga D., *Shipping companies strategies and Mediterranean ports competitiveness*, July 3, 2001.

CNEL(Consiglio Nazionale dell'Economia e del Lavoro), *Gli investimenti diretti esteri in entrata e in uscita dall'Italia*, Osservazioni e Proposte, April 2002.

CNEL(Consiglio Nazionale dell'Economia e del Lavoro), *La competitività della portualità italiana. Osservazioni e proposte*, 27 January 2005.

CONFETRA (Confederazione Generale Italiana dei Trasporti e della Logistica), *La logistica italiana*, reported by the President Fausto Forti, annual meeting, Rome, 1 February 2011.

COPIT (Comitato di Parlamentari per l'Innovazione Tecnologica e lo Sviluppo Sostenibile), *Le autostrade del mare*, Rome, 2006.

Costa P. and Maresca M., *The European future of the Italian port system*, Venice, Marsilio Editori, first edition: December 2013.

Coupland E. on behalf of Parcel2Go.com, *The 'last mile' Problem*, November 04, 2013. See: <http://www.supplychaindigital.com/logistics/3355/The-last-mile-problem-by-Parcel2Go> (last accessed in July 2014)

CRESME, *Il mercato delle opere pubbliche in Italia*, final report, in UNIONCAMERE, *Lo stato dell'arte delle infrastrutture in Italia*, May 2008.

Deandreis M., *Come ripartire dai porti*, in Il Sole 24 Ore, 31 January 2014.

De Forcade R., *Logistica e porti, «tassa» da 36 miliardi*, in Il Sole 24 Ore, 16 October 2013.

ESPO Green Guide. Towards excellence in port environmental management and sustainability, Brussels, October 2012.

ESPO / EcoPorts Port Environmental Review 2009. European Sea Ports Organisation, s Review of Environmental Benchmark Performance in collaboration with the EcoPorts Foundation (EPF), Brussels, February 2010.

ESPO / EcoPorts Top environmental priorities of European Ports for 2013. An analysis taking port size and geography into consideration, Brussels, December 2013.

ESPO, *Una guida pratica per i decisori politici dell'Unione Europea*, 24 November 2004.

EUROPEAN COMMISSION, S. Kallas, *A vital resource: Europe's ports face winds of change*, SPEECH/12/640, Conference on European ports policy, Brussels, 25 September 2012.

EUROPEAN COMMISSION, *Clean fuels for transport: Member States now obliged to ensure minimum coverage of refueling points for EU-wide mobility*, IP/14/1053, Brussels, 29 September 2014.

EUROPEAN COMMISSION, *Commission proposes upgrade for 300 key seaports*, IP/13/451, Brussels, 23 May 2013.

EUROPEAN COMMISSION, *Core Network Corridors. Progress report of the European coordinators*, September 2014.

EUROPEAN COMMISSION, SPEECH/13/451 by S. Kallas, *Europe's ports: a vital gateway to the rest of the world*, Brussels, 23 May 2013.

EUROPEAN COMMISSION, European ports: an engine for growth.
Available at: http://ec.europa.eu/transport/modes/maritime/infographics_en.htm
(last accessed in January 2015).

EUROPEAN COMMISSION, *European Parliament vote "milestone" in the roll out of clean fuels for transport*, IP/14/440, Brussels, 15 April 2014.

EUROPEAN COMMISSION, *First steps of Galileo – European satellite navigation system achieves its first position fix*, IP/12, Brussels, 12 March 2013.

EUROPEAN COMMISSION, *Galileo: Europe launches its first satellites for smart navigation system*, IP/11/1220, Brussels, 21 October 2011.

EUROPEAN COMMISSION, *Galileo will boost economy and make life of citizens easier*, MEMO/11/717, Brussels, 21 October 2011.

EUROPEAN COMMISSION, *Keep Europe moving: a transport policy for sustainable mobility*, IP/06/818, Brussels, 22 June 2006.

EUROPEAN COMMISSION, *La nuova politica delle infrastrutture dei trasporti dell'UE*, MEMO/13/897, Brussels, 17 October 2013.

EUROPEAN COMMISSION, *Ports: an engine for growth*, COM(2013)295 final, Brussels, 23 May 2013.

EUROPEAN COMMISSION, *Ports 2030. Gateways for the trans European transport network*, foreword by Siim Kallas, October 2013.

EUROPEAN COMMISSION, Proposal for a *regulation of the European parliament and of the council on Union guidelines for the development of the Trans-European Transport Network*, COM(2011)650 final, Brussels, 19 October 2011.

EUROPEAN COMMISSION, SPEECH/12/352, S. Kallas, *Steering a course for the future: Europe's ports in the 21st century*, European Sea Ports Conference, Sopot, 11 May 2012.

EUROPEAN COMMISSION, *The Marco Polo programme – results and outlook*, COM(2013)278 final, Brussels, 14 May 2013.

EUROPEAN COMMISSION, *Trans-European transport network. TEN-T priority axes and project 2005*, Brussels, 2005.

EUROPEAN COMMISSION, S. Kallas, *Transport financing: the way ahead*, SPEECH/12/53, Brussels, 2 February 2012.

EUROPEAN COMMISSION, *Transport: new EU infrastructure policy*, IP/13/948, Brussels, 17 October 2013.

EUROPEAN COMMISSION, *White Paper. European Transport Policy for 2010: time to decide*, 2001.

FLC (Freight Leaders Council), *Dal porto all'hinterland: soluzioni per una catena logistica competitiva*, quaderno n. 23, June 2013.

FONDAZIONE PER LO SVILUPPO SOSTENIBILE, *Genova-Rotterdam: un corridoio sostenibile*, Rome, October 2012.

Foschi Alga D., *The maritime container transport structure in the Mediterranean and Italy*, Discussion Papers del Dipartimento di Scienze Economiche – Università di Pisa, n.24, 2003.

Kallas S., *Memo on EU Ports Policy*, Rotterdam, 8 September 2011.

Lunghi L., *I porti italiani: lo stato dell'arte e le prospettive di sviluppo*, 27 November 2013.

Mariano G., *Il mare italiano*, in *Gli imperi del mare*, LIMES – rivista italiana di geopolitica – n. 4, 2006, pp. 207-216.

Ministero delle Infrastrutture, *Dal Progetto 80 all'Italia che verrà*, reported by Archibugi F., Roma, 20 Febbraio 2007.

Mottley R., *The Early Years: Malcolm McLean*, American Shipper, 1 May 1996; quoted in Mayo A-J and Nohria N., *The Truck Driver who Reinvented Shipping*, excerpted from Mayo A-J and Nohria N., *In Their Time: The Greatest Business Leaders of the Twentieth Century*, Harvard Business School Publishing Corporation, 2005.

Notteboom T., *Dock labour and port-related employment in the European seaport system: key factors to port competitiveness and reform*, report prepared for European Sea Port Organization (ESPO), Antwerp, University of Antwerp, ITMMA, May 2010.

Notteboom T., *Dynamics in port competition in Europe: implications for North Italian ports*, workshop Milan, 18th April 2012.

OECD Glossary of Statistical Terms, see: <http://stats.oecd.org/glossary/detail.asp?ID=4303>, last updated on April 29, 2003 (last accessed in March 2014).

OECD Glossary of Statistical Terms, see: <http://stats.oecd.org/glossary/detail.asp?ID=6254> (last accessed in June 2014).

Otinordovest, *Corridoio Reno-Alpi (ex Corridoio 6 Genova-Rotterdam)*, December 2013.

Palazzari V., *I nostri porti soffocano*, in *Limes – rivista italiana di geopolitica – n. 4/2006*, pp. 217-223.

Paolini M., *Adriatico-Baltico, un asse che serve all'Italia*, in *L'Italia presa sul serio*, LIMES – rivista italiana di geopolitica – n. 2, 2006.

Pascetta C., *I trasporti marittimi: tra squilibri strutturali e funzionali*, in *Il Mediterraneo. Geografia della complessità*, a cura di Fuschi M., FrancoAngeli, Milano, 2008.

Pollock G., *Back to the future: understanding China's return to Africa and its implications for U.S. policy*, in *Journal of Public and International Affairs*, vol. 18, 2007.

Ridolfi G., *Rotte oceaniche e servizi feeder. Il nuovo ruolo del Mediterraneo*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002.

Rodrigue J-P, Comtois C. and Slack B., *The Geography of Transport Systems*, London and New York, Routledge, 2006.

Ruggiero L., *Il ruolo strategico del Canale di Suez e le prospettive della portualità mediterranea*, in Geotema – Porti, trasporti marittimi, città portuali – year XIV, January-April 2010, Pàtron Editore.

Sellari P., *Geopolitica dei trasporti*, Roma-Bari, Editori Laterza, 2013.

Slack B., *Globalisation in maritime transportation: competition, uncertainty and implications for port development strategy*, in Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002.

Soriani S., *Porti, città e territorio costiero. Le dinamiche della sostenibilità*, Bologna, Il Mulino, 2002.

Soriani S. and Zanini F., *Trasporto marittimo, transhipment e porti nel Mediterraneo. Evoluzione recente e prospettive di sviluppo*, 2010.

SRM, *Le relazioni economiche tra l'Italia e il Mediterraneo*, rapporto annuale 2013.

SRM, *Logistica e sviluppo economico. Scenari economici, analisi delle infrastrutture e prospettive di crescita*, Naples, research presented on 15 October 2013.

SRM, Rapporto annuale 2011, *Le relazioni economiche tra l'Italia e il Mediterraneo*, Napoli, 2011.

SRM, Sintesi della ricerca *Trasporto marittimo e sviluppo economico. Scenari internazionali, analisi del traffico e prospettive di crescita*, Naples, 2012.

The European House – Ambrosetti, *Il rilancio della portualità e della logistica italiana come leva strategica per la crescita e la competitività del Paese. Documento di indirizzo strategico*, research promoted by Assoport, Fedespedi and Federangenti, 18 June 2013.

Dimitrios Theologitis interviewed by George Hoyt, *EU Bleu Belt*, 8 November 2010.

Available at:

http://www.faceofshipping.com/gallery/by_organisation.php?org=European%20Commission (last accessed in January 2015).

Thorez P. and Joly O., *Port Competition in the Northern Range from Le Havre to Hamburg*, in *Promet – Traffic&Transportation*, Vol. 18, 2006, No. 2.

Vallega A., *Geografia delle strategie marittime. Dal mondo dei mercanti alla società transindustriale*, Milano, Mursia, 1997.

Valleri M.A., Lamonarca M. and Papa P., *Port governance in Italy*, in *Research in Transportation Economics*, vol. 17, 2007.

Vanolo A., *Geografia economica del sistema mondo*, Torino, UTET, 2010.

Vanuzzo A., *I porti italiani sono i grandi assenti del Mediterraneo*, 15 January 2013. Available at <http://www.linkiesta.it/porti-italiani-inchiesta> (last accessed in January 2015).

UNIONTRASPORTI, *La logistica e l'intermodalità in Italia e in Europa*, Aprile 2008.

UNITED NATIONS, *Commercial Development of Regional Ports as Logistic Centres*, New York, 2003.

SITOGRAPHY

www.ansa.it

www.ansamed.info

www.antoniotajani.it

www.corriere.it

www.online.stradeeautostrade.it

www.cepimspa.it

www.ec.europa.eu

www.efreightproject.eu

www.esa.int

www.ilsecoloxix.it

www.jus.uio.no

www.logisticsglossary.com

www.northcarolinahistory.org

www.portodigioiatauro.it

www.porto.genova.it

www.portsofnapa.com

www.portofrotterdam.com

www.port.venice.it

www.seareporter.it

www.shortsea.info

www.supplychaindigital.com

www.uirr.com

www.unioneinterportiriuniti.org

<http://www.waterfrontcenter.org/about/manifesto.htm>

Beijing Action Plan, point 4.8 Transportation. Available at:

<http://www.focac.org/eng/zxxx/t954620.htm> (last accessed in December 2014)

China's presence in African ports: investment across the ocean, 2013. Available at:

<http://epthinktank.eu/2013/05/13/chinas-presence-in-african-ports-investment-across-the-ocean/> (last accessed in January 2015)

Italian ports losing market share to southern Med, 22 November 2013. Available at:

<http://www.ansamed.info/> (last accessed in December 2014)

ACKNOWLEDGEMENTS

Al termine del mio lavoro, vorrei rivolgere un sentito ringraziamento alle persone che mi hanno permesso di raggiungere questo importante traguardo.

Innanzitutto, ringrazio il Professor Stefano Soriani, per la disponibilità, la pazienza e la comprensione con le quali mi ha seguita durante tutto il percorso di stesura e revisione della tesi.

Un grazie di cuore ai miei genitori, due persone stupende che mi hanno accompagnato nel mio viaggio di vita e di studio, e che mi hanno fatto il regalo più grande che un figlio possa ricevere: hanno creduto in me. Grazie per i vostri insegnamenti, le vostre parole e i vostri sorrisi, perché è questo tutto quello che conta. Un pensiero speciale va a mia mamma, perché so bene quanto ha combattuto per riuscire a vedermi arrivare alla meta, ma se n'è andata troppo presto per poterci essere, lasciando un vuoto incolmabile. Ringrazio mio fratello, le mie zie e mio zio, che non mi hanno mai fatto mancare il supporto e l'affetto di cui avevo bisogno, che hanno creduto in me e mi hanno dato la forza di rialzarmi, stringere i denti e arrivare al traguardo.

Un grazie a Vanny, per avermi sempre spronato a fare di più, anche andando oltre quelli che prima pensavo fossero i miei limiti, a pormi degli obiettivi concreti e a raggiungerli con forza e determinazione.

Un ringraziamento speciale alle amiche di sempre, che mi sono state vicine in un periodo difficile e hanno condiviso con me gioie e dolori, perché ho sempre saputo che le avrei ritrovate proprio lì dove le avevo lasciate: al mio fianco.

Grazie a Marzia, per essere sempre stata presente, per la vicinanza in un periodo difficile per entrambe, e per gli abbracci che non ho mai avuto bisogno di chiedere.

Un grazie a tutte le persone speciali, vicine e lontane, che mi hanno supportato con vicinanza e affetto in questo periodo, e hanno reso un po' più facile il raggiungimento di questo traguardo.

Infine, un ringraziamento sentito va alla sig.ra Maria Antonietta Zonin, per la disponibilità e l'interesse dimostrato verso il mio percorso di tesi, e all'Avv. Giambattista D'Aste, Segretario Generale dell'Autorità Portuale di Genova, per avermi concesso del tempo prezioso ed aver soddisfatto le mie curiosità sull'argomento.

