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Long term impact of a major infrastructure project: the port of Gioia Tauro

Mario Genco*, Emanuela Sirtori*, Silvia Vignetti*

ABSTRACT

This paper illustrates the story of the Port of Gioia Tauro, a major infrastructure investment co-financed by the European Regional Development Fund in the period 1994-1998, but whose origin dates back to the beginning of the 1970s. It draws from a recent ex-post evaluation carried out for the European Commission on a sample of ten major infrastructures in the Transport and Environment sectors aimed at assessing the long term effects produced by the project and interpreting the key determinants of the observed performance. The analysis shows an emblematic story of great business success and unexploited potential for local development: the overall assessment of the economic impact of the project is mixed, stressing the multi-faceted dimensions of development plans. In particular, the paper discusses to what extent factors such as governance, managerial response and social acceptability can be key determinants of long term effects of a large infrastructure project, more than forecasting capacity or project technical design. It also offers a pilot case testing an innovative evaluation exercise combining cost-benefit analysis with qualitative assessment and adopting a long-run perspective (30 years), which extends into both the past and the future, and requires a mix of retrospective and prospective analysis.

Keywords: Regional development, transport infrastructure, ex-post evaluation

JEL codes: H54, O18, R58

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1. INTRODUCTION

A large share of public investment in the EU Member States is for infrastructure, the largest proportion being in the cohesion countries and New Member States and in the transport and environment sectors. The rationale underpinning EU policies in the transport sector relates to a number of considerations related to the increase in productivity and competition, accessibility to a broader range of goods and services, the reduction of the distance across Western Europe and South-Eastern New Member States, and within an individual country, between its main cities and peripheral areas and, ultimately, contributing to the promotion of economic, social and territorial cohesion in Europe.

Justification of public funding for major infrastructures stems from the expectation that they foster economic growth by enhancing factor productivity, and promote convergence in income distribution and living standards. The literature shows that although this holds true at an aggregate level (at country level or with an aggregate measure of infrastructural endowment, see for example Barro 1990 or Aschauer 1989), if the regional dimension, different typologies of infrastructures and different conditions or nature of investments are considered, a diverse picture emerges.

With particular reference to transport sector, location theory and new economic geography put emphasis on divergence forces of agglomeration effects and spatially unequal distribution of resources. This aspect has been explored particularly by some research contribution (De Rus et al. 1995, Martin 1997) highlighting how they can even be detrimental for poor or peripheral regions.

These contributions are mainly based on macro-economic modelling rather than on micro-economically founded approaches and they aim at exploring the economic relationship between the aggregate amount of funds invested in the sector and economic performance. Appraisals of individual projects with the aim of unveiling the process leading from project implementation to the ultimate effects on economy and society, looking at the broad spectrum of potential success conditions, are rarer¹, though inspiring in terms of practical hints for project promoters and managers.

This paper contributes at filling this gap and aims at providing additional insights on the economic effects of transport infrastructures, by presenting the case of the Port of Gioia Tauro, a major project² co-financed by the European Regional Development Fund (ERDF) in the period 1994-1998. It draws from an ex-post evaluation recently carried out on behalf of the European Commission assessing the long term effects produced by the project and interpreting the key determinants of the observed performance³.

The dimensions of analysis related not only to the typologies of long term contributions to growth and quality of life that can be observed but also to the point in the project's lifetime at

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¹ An interesting and recent example is Flyvbjerg B. et al. (2003)

² Major projects are defined by art. 40 of EC Regulation 1083/2006 and in the new draft EU Regulations (pending of approval).

³ The full reports are available at: http://ec.europa.eu/regional_policy/information/evaluations/index_en.cfm#15

which the effects materialise for the first time and stabilize and, most importantly, the key determinants of the project performance.

The methodology developed to answer the evaluation questions consists of a combination of quantitative (Cost Benefit Analysis, CBA henceforth) and qualitative (interviews⁴, surveys, searches of government and newspaper archives, etc.) techniques, integrated in such a way as to produce a project history.

This paper is organised as follows: in the second section the background and chronicle of the Gioia Tauro transshipment hub is recalled, the third section focuses on the project current performance, the fourth section discusses the assessed long term impacts and the following section discusses the key determinants to project performance. The concluding chapter draws the relevant lessons.

2. HISTORY

2.1 Project context and origin

Gioia Tauro is a municipality in the province of Reggio Calabria, in the Italian Mezzogiorno region of Calabria, on the Tyrrhenian coast. As of 2012 the Calabria population is almost 2 million. In the 1990s, Calabria was the least developed region in Italy and still is today. In 1995, regional per capita GDP was more than 40% lower than the Italian average, and 40% lower than the average per capita GDP in the EU. Since the 1970s, economic conditions have improved, thanks to a more modern agriculture sector, growth in tourism and a growing commercial base. This favoured a substantial decrease in unemployment in recent years, which nevertheless remains one the highest in Italy and in Europe: in 2009 it was 11.3% for both Calabria and Reggio Calabria⁵. A still limited industrial activity and a wide and long-standing gap between Calabria and the national average in the level and quality of infrastructure endowment contributes at constraining the development perspectives of the region. The ancient and deep-rooted presence of organised crime, which has always tried to profit from business activities in the area, especially those related to the use of public funds, represents an additional determinant of a poorly enabling context.

Since its origin, the port of Gioia Tauro has been conceived as a project with significant potentiality to trigger economic development in the province and the whole region. Its story dates back to the beginning of the 1970s, when following an outbreak of violence in Reggio Calabria in 1970, the ‘Reggio riots’⁶, as a compensation measure it was decided to build a large steel plant, intended to become the fifth Italian steel-industry centre and meant to bring income and approximately 7,500 jobs to Calabria. In order to support the plant operations it was decided to build an artificial port in the Gioia Tauro Plain, previously dedicated to farming activities.

⁴ Seventeen interviews with key stakeholders and experts have been carried out in the period May-July 2011

⁵ Total unemployment rate of people older than 15. Due to the effects of the economic crisis, the Calabria unemployment rate raised to 19.3% in 2012.

⁶ The riots exploded after the decision of the central government to locate the regional capital in Catanzaro instead of Reggio Calabria as expected by the Reggio people.

Huge public investments (about 770 billion Italian Lire, i.e. 400 million Euro up to 1992) were undertaken to dig the seabed and build the artificial channel. However, due to a sectoral crisis the steel plant project was eventually abandoned (in 1979) and the port, for the most part already constructed, remained unused. In the following years several plans for the port's conversion were scrutinized, the most promising being the construction of a coal-fired power generation plant, but in the end, it was never built and Gioia Tauro became a major example of planning failure.

2.2 Opening of the transshipment port

On 3 September 1993 the Italian Government received a request from Contship Italia S.p.A. for a concession to convert the dock basin into a container terminal for transshipment traffic⁷. Contship is a Swiss company operating as a global container carrier on the Asian, Indian, Australian and South American trade routes mainly to and from Europe. It had been founded by Angelo Ravano in 1968 and in 1970 an agency arm was set up in Milan to take care of maritime terminal investments and container-related activities in Italy.

Under the agreement between Contship Italia and the Government, the company obtained the concession of 2,450 m of quay⁸ for transshipment purposes for 50 years, after which the assets reverted to the Italian Government who leased the infrastructure in exchange for a fee. In a Programme Agreement signed by the Ministry for the Budget and Economic Planning, the Ministry of Transport, the Calabria Region and Contship Italia, the latter (more precisely its subsidiary Medcenter Container Terminal, MCT henceforth, created specifically for the project) committed itself to invest 110 million Euro by 1997 and an additional 38 million Euro by 2001 to be spent on equipment. In addition it committed to provide by 2001 one million TEU (Twenty-Foot Equivalent Units)⁹ of container traffic and 450 new jobs. The national and regional authorities committed to investing 43 million Euro for civil works to adapt the existing infrastructure to the needs of the transshipment activity. Furthermore, an application for funding was submitted to the European Commission and an ERDF grant amounting to 40 million Euro¹⁰ was approved for the project.

Strong arguments supporting the port project were mainly related to the promise of development for the Calabria region and the reliability and reputation of the private investor (as well as its financial commitment), which was in the position to commit to a traffic target thanks to its capacity to dialogue with the key market players¹¹. At the same time, the port project also raised some concerns, at a national as well as EU level. At a national level the historical ports (mainly Genoa but also Naples and Livorno) were worried about possible displacement effects of traffic flows and raised concerns about the competition distortion

⁷ Transshipment is a scheme of transport, consisting of disembarking cargo from a large ship (or mother vessel) in an intermediate destination port and then embarking it onto smaller ships (feeder vessels) for onward transport to its final destination. The transshipment hub receives mother vessels from transoceanic routes and distributes their loading to small feeders going to regional ports. Transshipment ports are those where transshipment represents 95% or more of their total traffic.

⁸ Out of a total of 4,830 m. of quay.

⁹ The standard measure for containers.

¹⁰ This and the previous figures are in nominal terms at 1993 prices.

¹¹ According to a document prepared by MCT to follow up on the state of implementation of the Agreement, in the period 1993-1995, 70 meetings with high level managerial staff of top ranking world shipping companies were held by Contship for commercial purposes (Source: MCT).

effects of public support for an operation that other ports were trying to implement with private funds only. National and EU public authorities and shipping companies operating the ports lobbied for equal opportunities, but after a debated inter-service consultation within the European Commission and an additional expert opinion¹², the financial assistance was assessed not to represent unfair competition¹³. The financing decision of the Commission could not however disregard such an issue: the grant had to be notified as State aid and a condition on the use of funds was also added. Notably, the co-funded investment had to be exclusively related to the expenditure of the first phase of development and for ten years the infrastructure had to be solely used for transshipment purposes¹⁴. Otherwise, Italy would have to pay back, totally or partially, the amount of aid.

According to the project document prepared by Contship (1994a), the expected economic return on investment was estimated to be equal to 11.68% and the financial return to 19.60%. Less clear were the objectives on the public side. Specific objectives were not only to implement the transshipment terminal but also the planned power plant and additional port-related activities to be localized in the industrial area. In order to manage the port services it was planned to set up a private agency with a promotional mandate (ASI-REG).

Although the works would only be completed in 1998, in September 1995 the first ship entered the port. Infrastructure works were finished on time thanks to additional private resources, and the Harbourmaster's Office, the Custom House and the Port Authority were established.

Today the Port of Gioia Tauro is classified as a commercial and industrial transshipment port¹⁵. The main infrastructure consists of an artificial channel running parallel to the coastline, with an entrance and an evolution basin, two long quays and a large land area behind the channel, designated for industrial usage. The total port area corresponds to about 3.5 million square metres, with a channel 220 metre wide and 3 km long.

The transshipment activity is carried out on an area of 1.5 million square metres¹⁶, on the main quay by Medcenter Container Terminal (MCT), part of the Contship Italia Group, the terminal operator which actually started the operations and benefitted from the ERDF co-funding. There is also a car carrier terminal which in 2007 handled 75,000 cars. Some maritime companies are working as suppliers for the terminal operator, providing additional maritime services such as custom operations, assistance for the loading and discharging of cargoes, warehousing and distribution

¹² While at the beginning DG Transport suggested asking the EIB to provide the technical expertise, the final decision was to select the experts through a public call for tender, which selected Coopers & Lybrand Ltd.

¹³ In addition, the expertise pointed that: "*The concession fee appears fairly low in relation to the land area involved, local land prices, and the potential profitability of the concession*".

¹⁴ There were no other significant transshipment port in the Mediterranean sea at that time, except Malta which was not part of the EU at the time.

¹⁵ It is classified as category II class I of International relevance (Law 84/1994).

¹⁶ The area on which MCT started its operations in 1994 covered 1.2 million square metres but underwent some enlargements over time.

Figure 1. Picture of the port

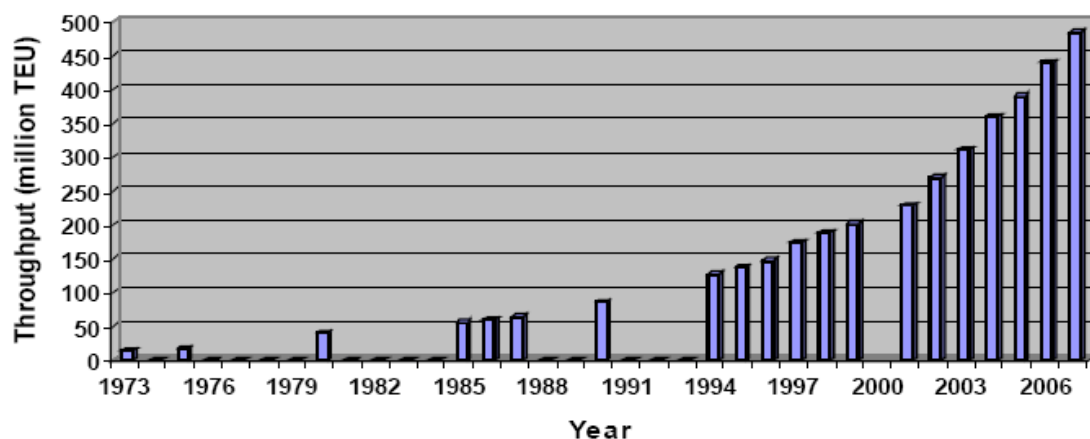


Source: Google Earth

3. START-UP, CONSOLIDATION AND CURRENT PERFORMANCE

The Contship plans proved to be realistic and underpinned by a thorough understanding of the shipping market context and development scenarios. In the 1990s maritime freight traffic was undergoing a structural change at the international level brought about by freight containerisation. At the same time globalisation dynamics emphasised the importance of maritime traffic in the Mediterranean for manufactured goods coming from the Far East to European markets: since 1988 the Mediterranean container market has had an average annual growth rate of 10.5%¹⁷ and Mediterranean traffic share of total European traffic rose from 25.8% in 1993 to 31.4% in 1995¹⁸.

Figure 2. World container port throughput 1972 - 2007



Source: International Bank for Reconstruction and Development, 2009

In Italy, container traffic increased from 2.31 million containers in 1993 to 4.82 million containers in 1997 (+108%) and Gioia Tauro reached a market share of 29%, quickly

¹⁷ Source: European Commission (1996).

¹⁸ Bruno Dardani (1996). Mediterraneo alla riscossa, in *Il Sole-24 Ore*, 23 May 1996.

overtaking Genoa which remained at 24% over that period¹⁹. After only ten months after opening, the level of traffic at Gioia Tauro rose above even the ex-ante forecasts and traffic and employment targets were achieved earlier than foreseen (1997 rather than 2001). It soon became the premier transshipment hub in the Mediterranean.

Figure 3. Gioia Tauro as Mediterranean hub



Source: MCT

In the meantime, the newspapers began to spread this positive news story, and the expectations of the people of the Calabria region were extremely high. The port of Gioia Tauro was of interest to the main shipping companies for four key reasons: its central position in the Mediterranean and proximity to the main Suez-Gibraltar sea-route; the depth of water, land-side infrastructure and mechanical equipment required to support large scale transshipment operations; its competitive prices due to the advantage offered by the previously-built facility whose costs had already been written off and, finally, it was being operated by an experienced and highly skilled management team committed to providing a quality service²⁰.

In the original plans it was recognised that Gioia Tauro also had the opportunity to become an intermodal centre where containers could have been loaded (and unloaded) not only on ships, but also on trains and trucks, to reach their destination markets in Italy and Europe. This opportunity, which other transshipment ports (such as Malta) do not have, was clearly in Ravano's mind and that of the Italian authorities when the Programme Agreement was signed and contributed to raising expectations for the port. While road transport is the most affordable way to connect Gioia Tauro to the neighbouring Southern regions, railways are more appropriate for longer distances in terms of cost²¹. In the early years of port activity, the

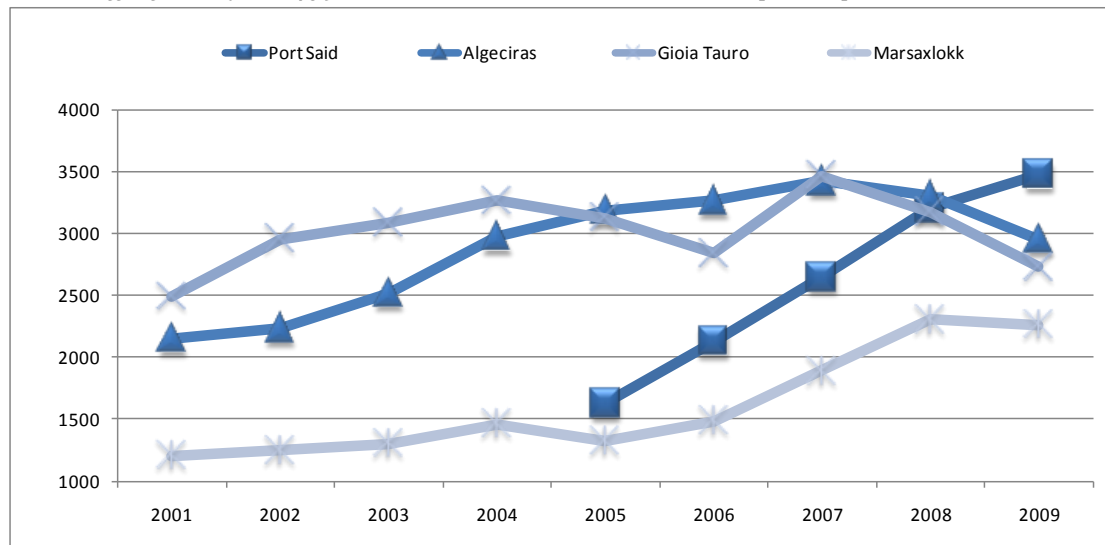
¹⁹Committee for the Coordination and Development of the Gioia Tauro Area, 1997, p. 8.

²⁰ In the 1999 EC *Final Implementation Report for the period 17.8.1994-31.12-1998* stated that “the results and the international actors in the sector confirm the positive assessment and the confidence about the terminal, which is more and more considered as a strategic port at the global level. The constant growth of traffic volumes and number of ships requires, almost continuously, the purchase of additional equipment and the recruitment of additional employees. [...] The co-financed investment by the European Commission succeeded in promoting the take-off of an auto-propulsive development that produced, as an additional effect, acceleration of the growth rate of the port” (European Commission, 1999).

²¹ Transporting one container to Milan costs approximately 680 Euro by train and 1,250 Euro by truck. By contrast, railway transport costs to Naples are slightly higher than for truck, amounting respectively to 530 Euro and 450 Euro (C-Log, 2008).

volume of containers handled by land grew, and from 4% in 2003 it reached 5.5% in 2006²²; currently it remains at 4%.

Figure 4. Traffic flows (TEU's/y) in the main Mediterranean transshipment ports



Source: Authors processing Containerisation International data

In 2007, before the world economic crisis, Gioia Tauro was the premier transshipment hub in the Mediterranean. The top four shipping companies in the world were clients of the Port and it had achieved an unsurpassed market position since the beginning of its operations. In 2008 Gioia Tauro definitively lost its leading position in Mediterranean transshipment, but as early as 2004 it was already growing at a slower pace than its competitors.

Actually, despite the excellent start, Gioia Tauro failed to maintain and reinforce its leading position over the years, perhaps relying too much on its outstanding geo-physical characteristics (depth of the seabed, length of the quay, strategic central position). Transshipment demand is however extremely volatile and the shipping market, although fragmented, is dominated by a few major companies²³ who change their strategies quite quickly to react to context and market developments²⁴. One observed trend in company strategies is to directly invest in container terminals which then they operate themselves (often in a monopoly position), as for example the Korean Hanjin in Turkey.

As confirmed by sector experts interviewed, in this context a key competitive advantage, more than the geo-physical characteristics of the infrastructure, is the quality and reliability of the service provided, not only by the private operators but also by the additional public actors providing ancillary services. A vital success factor is thus the capacity to maintain high productivity levels in order to cope with competition from other emerging ports and develop proactive commercial strategies aimed at medium-term agreements with shipping companies,

²² Data provided by Calabria Region.

²³ The continuous need for high and risky investments (for example for the purchase of ever larger ships) facilitates market concentration dynamics. For example, Maersk recently acquired some of the historic maritime operators such as Sea Land, CMBT, Safmarine, P&O Nedlloyd (Source: interviews to MCT).

²⁴ It was reported for example by some interviewees that, after the financial crisis in 2009, shipping companies decided to no longer cross the Mediterranean Sea but to circumnavigate Africa, as in the past, in order to save the cost of navigating the Suez Canal.

in order to stabilize traffic flows in the medium run. As far as the Port of Gioia Tauro is concerned, the reduced working hour of some port service (for example related to the custom check), along with higher average hourly labour cost²⁵, lower productivity²⁶ and higher taxes²⁷ compared to other competitor ports, especially in North Africa, were and still represent its main competitiveness problems.

At present, the port is going through a period of economic difficulties, with growth rates being lower than the Mediterranean average and even lower than the general European average for the period 2003-2009. The recent financial crisis saw a dramatic contraction in global traffic flows²⁸ and this has exacerbated port competition and the need for high productivity levels (which translates into cost savings for shipping companies) in the Mediterranean ports. Other Mediterranean ports (especially Algeciras in Spain, Tangier in Morocco and Port Said in Egypt) undertook important investments and built or strengthened transshipment hubs with the help of significant public investments²⁹. On foot of this competition, made even fiercer by the financial crisis which shrank global maritime trade, Gioia Tauro lost market share, and in 2010 Port Said and Algeciras ranked first and second as Mediterranean transshipment hubs.

In addition, intermodal transport did not take off. According to technical studies³⁰ and interview reports, this is mainly due to infrastructural limits in the Italian (especially Southern) railway system³¹ and in the railway connection between the MCT terminal and the national railway network, which prevent the infrastructure from being fully exploited³². Besides infrastructural constraints, the reduction in port business also contributed to decreasing the demand for intermodal transport³³.

As a response to this situation, and with a pivotal role played by the European Commission, a Framework Programme Agreement (FPA) was signed in September 2010 between the national government, regional and local authorities with an ambitious strategic objective of re-launching the port and the broader Gioia Tauro area. The vision of the strategy relies on the idea of developing a logistics district and intermodal platform in order to increase the

²⁵ According to Eurispes (2010), the average hourly cost of a transshipment worker in 2009 is 22.1 Euro in Italy, 3.1 Euro in Morocco and 1.9 Euro in Egypt. Similar differences are experienced in case of white-collars costing 22.9 Euro in Italy, 10.1 Euro in Egypt and 7.9 Euro in Morocco.

²⁶ As a matter of example, productivity level of cranes (in terms of crane moves per hour) is 23 in Gioia Tauro as compared to an average of 30 in Mediterranean ports and a range between 27 and 32 in international container ports (Source: C-Log, 2008 and UNCTAD, 2010).

²⁷ In Gioia Tauro the total cost of calling on the port (including anchorage tax, piloting, towing and mooring) is 25% higher than in Port Said and 500% higher than in Malta (Source: Eurispes, 2010).

²⁸ Using UNCTAD (2010) words: "*The year 2009 witnessed [...] the sharpest decline in the volume of global merchandise trade. In tandem with the collapse in economic growth and trade, international seaborne trade volumes contracted by 4.5% in 2009. While no shipping segment was spared, minor dry bulks and containerized trade suffered the most severe contractions*".

²⁹ As highlighted by the interviewed experts, Spanish ports, in particular Valencia, Algeciras and Barcelona, grew thanks to their new quays directly linked to the railway system and to the attention paid to the quality of the service supply. On the other hand, the Egyptian Port Said established with success a free trade area that helped it achieve exceptional growth rates (63% in 2005-2007 and almost 32% in 2007-2009).

³⁰ C-Log (2008).

³¹ Too small tunnels, lack of electrified rails or double tracks, especially in the Southern regions, are not suitable for long freight trains carrying almost 3 m. high containers (the modern 'High Cube' containers).

³² The radius of curvature of half of the existing of tracks is too small and not suitable for long freight trains. Hence, only half of the existing rail lines are operational.

³³ It has been pointed out by interviewees that Grand Alliance was the shipping line that mostly used the railway gateway.

developmental spill-over effects of the port and to move the port from a pure transshipment hub to a multi-purpose port. To date the implementation of the interventions finalized at improving the port's inter-modality and bringing new economic activities in the port area has been severely delayed, while infrastructural works to connect the port to the railway network are on-going. The European Commission's evaluation highlights that the possible future scenarios are varied.

4. LONG-TERM DEVELOPMENT EFFECTS

Evidence shows that in terms of effects on socio-economic development and quality of life, the port of Gioia Tauro produced mixed results: development of the transshipment business gave rise to positive effects on overall economic growth, but the effects on local development have been rather disappointing.

More in detail, positive, although not as significant as expected ex-ante, effects in terms of direct economic growth are the most significant long term effects produced by the port of Gioia Tauro. The transshipment and related activities created additional direct and indirect employment for MCT (reaching 1,200 people in 2007, the point of maximum expansion) and the shipping companies providing direct services to MCT. The 2009 list of all companies operational in the Gioia Tauro area counts about 2,100 employees. In terms of wealth, most of the interviewees and many press articles, quoting the Bank of Italy, indicated that the port is currently providing 50% of the total private income produced in the Calabria region³⁴. It is also acknowledged that some transport and logistics companies have been established thanks to the port, while currently there is only one company processing products (coffee) imported via Gioia Tauro.

The result of the ex-post Cost-Benefit Analysis supports this finding. The economic rate of return on the project over a 30-year time horizon (1994-2024) is positive (10.44%), and the main economic benefit is via the employment created, captured by a low shadow wage³⁵. The project heavily relies on the existence of the unused port infrastructure built to serve the steelwork plant. If the port had had to be built specifically for the Contship/MCT operation it would not have been worth doing at all. Therefore, a social benefit stems from the consideration that a past, expensive and unsuccessful public investment was turned at least to a fruitful business operation providing some employment effect. Moreover, this result is valid under the hypothesis that the port will manage to attract other clients and to offer new services. Thus, much depends on the future development of the port activities as envisaged in the FPA.

Additional improvements are related to the learning and capacity building effect due to the spreading of a know-how related to the transshipment activity in a deprived area, and to the

³⁴This cannot be confirmed by the evaluators because of the unavailability of official data.

³⁵ The shadow wage used in the CBA is of 0.33. This value is supported by empirical work by Del Bo et al (2011) and stems from the characteristics of the labour market in the Calabria region, especially in terms of high unemployment. Sensitivity analysis on the shadow wage indicates that this methodological choice is a critical one, strongly influencing the value of economic performance indicators.

efficiency gains of the port and logistic system in the form of an increase in traffic demand. However the magnitude of the latter effect and its attribution to Gioia Tauro is uncertain.

Despite the initial positive expectations and enthusiasm at local, regional and national level, today significant negative impacts prevail in respect of the sense of frustration local people experienced due to the unfulfilled promise of widespread development in the broader GioiaTauro area. Social distrust and disillusionment are tangible effects, clearly perceived when talking to people, especially in this current time of crisis and uncertainty about the future.

Admittedly, this social distrust partly reflects the unrealistic level of expectations raised during the initial phase of the port development, which in turn reflected years of unmet promises following the plans for steel and the energy production plants. Still, it is undeniable that there is a significant unexploited potential related to the port's development despite many years (and much public resources) spent trying to trigger broader effects.

As a matter of fact, since the beginning of the project, works closely connected to the port have added a number of other publicly funded interventions aimed at creating conditions for the development of 'the broad area of Gioia Tauro'(covering an area of 3.6 million square metres). Interventions were aimed at diversifying the port of Gioia Tauro and, above all, the industrial zone behind it, by making it a driving force for local development.

In 1997, following a request by the EU a Master Plan was prepared, including a railway link between the port and the Rosarno rail station; the improvement and upgrading of the road network; the creation of an intermodal transport system; a maritime link between Gioia Tauro and Milazzo in Sicily (Ro-Ro traffic); the implementation of a plan for industrial development (to be supported according to the law 488/92); additional infrastructure investments and the establishment of a free trade zone. An important point taken up by the Master Plan was the use of a promotion company for the establishment of businesses in the area³⁶. The Coordinating Committee, however, failed to implement the Master Plan because of, according to analysts, weakness of the governance structure, such as lack of involvement of the provincial authorities and local municipalities, in its preparation, and conflicting, sometimes vested, interests.

Under this framework, an application for a Global Grant was submitted by the local authorities to the European Commission, in 1998, aimed at supporting the creation and development of Small and Medium Enterprises (SMEs) in the crisis-area around Gioia Tauro³⁷ mainly through a system of financial aids accompanied by guidance measures. The anticipated impact on employment was the creation or safeguarding of at least 450 permanent jobs through the launching of 35 new initiatives and the equipping of some 25 hectares with facilities for SMEs. National instruments for industrial promotion (in particular Law 488/92)

³⁶ To perform these tasks, the company had coordinating powers over both the ASI-REG Consortium for the Industrial Promotion of the Province of Reggio Calabria, and the Port Authority that was being established.

³⁷ The grant (about 20 million ECU) covered the period 1997-1999 and it was part of the priority axis concerning "Industry, crafts and services" outlined in the National Operational Programme for the regional economic development of the Mezzogiorno.

were also used to facilitate the location of new enterprises linked to the port activity. The executing agency was the a Consortium which had competence over the industrial zones areas and responsibility for deciding the allocation of lots.

Strong initial enthusiasm and the presence of financial incentives encouraged much entrepreneurial activity, however often lacking a precise strategy and expertise. In fact, unlike the historical ports, the Calabria entrepreneurial class with few exceptions³⁸ lacked the necessary know-how for maritime-related activities. Notwithstanding several attempts over the years to facilitate the promotion of new businesses (one of these involving attracting specialised firms from Northern Italy), most of these failed.

Judiciary evidence and press articles pointed to some complaints from local entrepreneurs of poor transparency and excessive bureaucracy in the allocation of locations in the industrial area. At the same time the executing agency believes that industrial promotion tools were not suited for the purpose since they did not address the actual constraints on the development of the industrial areas, such as the monopoly position of MCT, which does not allow other operators to expand port activity; the focus on transshipment which, by nature, is not suited to trigger positive spillover in the territory; and the lack of a strategic and integrated approach to the development of the whole area.

Organised crime also played a role in limiting the economic development of the Gioia Tauro area. Evidence from interview reports, press articles and judiciary reports confirms that organised crime has a strong interest in and influence on the port and port-related activities and that its pressure hampered the implementation of the business initiatives³⁹. However, although being a complicating factor, this is not deemed to be the main cause of the missed opportunity. On contrary, the interpretation suggested by the current analysis points in particular to the aspect of governance as the key determinant of the lack of significant and relevant industrial development.

5. DETERMINANTS OF THE PROJECT PERFORMANCE

While assessing the determinants of the project performance, a distinction can be made between ‘hard’ i.e. more technical (such as the solidity of the project design and forecasting capacity) and ‘soft’ dimensions, i.e. related to the capacity of the actors to manage and adapt to emerging conditions, in line with their respective role and responsibilities.

The evidence collected on Gioia Tauro points clearly to a negative role of the latter against a positive contribution of the former. In particular, the success experienced in the early stages by the transshipment terminal operations are undoubtedly due to the excellence of the initial project design and the forecasting capacity of the private investment plan together with the skills and professional capacity of the Contship management team. The excellent professional reputation, exceptional leadership and visionary capacity, together with a strong business

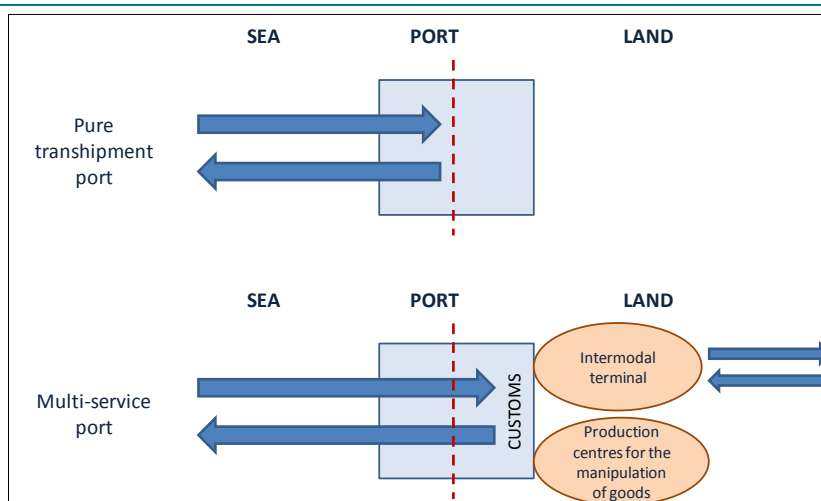
³⁸ These companies are currently suppliers and contractors of Medcenter.

³⁹ Past trials mentioned criminal pressures on some political decision-making processes, for example an ‘influence’ was said to be clear in the draft of the port Master Plan advocated during the Prodi government, however no politicians or public managers directly involved in the port activities were ever convicted in this regard.

interest of Angelo Ravano were pivotal to the decision to initiate the Gioia Tauro port project. The strong commitment of Contship was ensured also by management team carrying out the project implementation after Ravano's death in 1994. The team was able to respond to the impasse among the public actors by taking actions and implementing on its own (including investing extra money up-front in anticipation of funding) some of the investments expected to be carried out by the public sector⁴⁰.

Given its key features, transshipment activity per se is however not an appropriate tool for triggering larger development effects, especially in a context characterised by weak entrepreneurial ability, poor public security and scarce administrative capacity. In fact, because of its specific characteristics, pure transshipment tends to generate very little or no value added and development in the area where the port is located, since income is generated only where containers arrive at their final destination, where they are cleared (customs duties and VAT), opened and processed. A study⁴¹ estimated that when the goods are cleared through customs, stocked, handled and distributed through adequate and efficient transport infrastructures, the employment, turnover, profits and State revenues significantly increase⁴². In other words, transshipment can create local development only if it is integrated into the national and international logistical system.

Figure 5. Value creation in pure transshipment and multi-service ports



Source: Authors

Therefore, since the context was not suitable for such a development operation to spontaneously generate positive development effects through a bottom-up process, the role of public institutions and the governance structure underpinning their actions are a key ingredient of the observed performance.

Although the key constraints to economic development of the port project were recognised from the beginning and the necessary actions were identified, all the plans conceived to make

⁴⁰ For example, it was MCT who bought fire protection equipment and trained the rescue emergency teams.

⁴¹ Ministry of Transport (2008), quoted by Gian Antonio Stella, Corriere della Sera, 5 July 2011.

⁴² When moving from pure transshipment ports to multi-purpose ports "Turnover goes from 300 to 2.300 euro, profits from 20 to 200 Euro, income for the State from 110 to 1,000 Euro and for every 1,000 handlings 42 jobs can be generated, instead of 5", from Gian Antonio Stella, Corriere della Sera, 5 July 2011, quoting the Ministry of Transport.

the transshipment port project a driver for local socio-economic development (like the already mentioned Master Plan and the Global Grant) failed at the implementation phase due to a lack of coordinated, strategically oriented and focused implementation efforts. This result is the perverse effect of the combination of, from one side, the existence of a large number of institutions and stakeholders involved in the decision-making process, with unclear and/or overlapping responsibilities, and, on the other a general lack of motivation and coordination at different levels, which provides incentives for short-termism and opportunistic behaviour in the managing structures of key institutions.

Governance constraints are the result of a combination of national and local key characteristics of port governance. The globalization of maritime traffic and the recent process of decentralization of port functions and management have resulted in a complex system of European port governance structures, presenting a multiplicity of models depending on the level of decentralization, the role of private operators and the responsibility of management and administrative functions.

The nature of the global logistic chain and the way the decision-making mechanism works is such that there is the need for highly technical capacity and expertise to act with large global players and financial institutions. For this reason it is necessary that the appointment of the key public managers is made according to their capacities to perform this demanding task rather than in response to clientelism and opportunistic behaviour.

Port governance is an issue not only in Gioia Tauro but in the entire Italian context. As pointed by the ESPO (2010) survey on European Port Authorities, the Italian Port system is suffering from a delay in the reform process⁴³ aimed at addressing the current lack of integrated planning and management of the entire logistic supply chain at the national level. Port Authorities have limited autonomy, especially at the financial level (for example, they cannot autonomously decide to decrease or cancel the anchorage tax⁴⁴) and this hampers their capacity to manage the conflicting interests of port operators, claiming for a tax reduction in order to increase competitiveness, and other stakeholders.

In this fragmented national scenario, political support for the port system is more responsive to the pressures of local lobbies than to a transparent and consistent strategic vision.

As of today, many bodies have different competencies regarding management and development of the port and the broader Gioia Tauro area. Their specific mandates and objectives are not always aligned and consistent and often the ultimate effects have been a situation of difficult and unconstructive interactions. For example, a long-running dispute⁴⁵ exists between ASI-REG and the Port Authority, regarding the ownership of a vast area of the industrial zone and, consequently, the allocation of competencies over the area⁴⁶. There is a shared opinion among the interviewees that this situation paralysed on many occasions the

⁴³The last port reform (Law 84/1994) took place in 1994. It shifted competence from the public to the private operators and introduces a new classification of ports and port labour activities.

⁴⁴ This requires a decree from the central Ministry.

⁴⁵ Since the founding of the Port Authority in 1998.

⁴⁶ When the analysis was made, the case was pending at the Civil Court of Reggio Calabria.

decision-making process, delaying and jeopardizing the successful implementation of public actions.

Because of the extremely large number of parties involved, transaction costs and the incidence of fragmented actions are high. Strategic planning of the port development was independent and not integrated with the strategic planning of industrial development for the port-related activities. A fragmented sharing of responsibilities did not help with the attraction of new firms to the port. It was reported that the level of administrative and legal steps a firm is expected to take if it decides to locate in the industrial area and the number of bodies and institutions expected to be dealt with is so high that anecdotal evidence is available of several firms becoming frustrated with the effort required and giving up on the idea of establishing close to the Port.

Coping with such fragmented and complex distribution of responsibilities is made difficult by poor political will and possibly vested interests among the decision-making actors. Although the high visibility of the project and the attention of public opinion would be expected to play a positive role in enhancing political commitment to results-oriented behaviours, there are shared opinions among the interviewees that the political turnover at national and regional level led to discontinuity of strategic direction⁴⁷, which slowed down the process and created institutional impasse.

Industrial and logistical development requires quite a long timeline to plan, implement and operationalize the related infrastructures and services, since they involve railway connections, firm localizations, territorial marketing and transfer of know-how and technical skills. The nature of these initiatives is such that in order to generate some tangible results, a medium to long-term perspective is needed, while politicians tend to have much shorter vision.

Lacking robust national political coordination, there are stronger incentives in terms of prestige and political visibility for public managers to promote infrastructural works⁴⁸, rather than planning and regulating the service related to the operation of the infrastructure, the result being that much more effort and resources are spent on investing in infrastructure (also on improving skills) rather than on service provision in competitive markets (which is normally outside the control of public managers). This has led to a myopic logic in past (and also present) actions, of first building the infrastructure and then attracting the traffic (or, even worse, the belief that the traffic will automatically come). The need would be instead to reverse this logic, with the key transport operators expressing their needs and the conditions to be satisfied for the service to be competitive, and a strong partnership of transport and industrial operators, together with financing institutions and under strong political coordination, for the infrastructures to be realized.

On several occasions the EU Commission showed a high level of interest and commitment to promoting a sustainable and long-lasting local development in the Gioia Tauro Area, and

⁴⁷ In the period 1993-2010 ten different national governmental coalitions were in power, the longest-lived being the Berlusconi government in the period 11-06-2001/23-4-2005. Over the same period 5 different coalitions followed one another at the regional level.

⁴⁸ Responsibility in contracting public works entails a strong power and influence over local economic interests.

provided stimulus and funds under different headings. From a strategic perspective, it exercised pressures to stimulate and accelerate some of the measures deemed necessary to complete the development plan. It also promoted the establishment of an independent agency, committed to the long term development of the broader Port area, to overcome governance weaknesses. However, the experience shows that problems arise during the implementation phase, while the EU Commission has a key responsibility during the programming phase and until the co-financing decision is taken. After that, it has only limited or no capacity to influence the downstream phase, which is in the hands of national and regional actors.

6. LESSONS LEARNT

Defined as ‘the metaphor of a modernisation process without development’ or the ‘largest industrial development project ever promoted in the Mezzogiorno’, the Port of Gioia Tauro is an emblematic story of great business success and unexploited potential for local development.

In order to better clarify the causes of the missed opportunity in terms of economic development it is necessary to dig into the conditions that should have enabled a broader impact of the Port on the Gioia Tauro area. Since the beginning of the project it was clear to national and EU public decision-makers that the transshipment terminal would not generate, per se, a significant impact on the area in terms of economic development, unless a number of conditions were in place. These conditions were related in particular to the strengthening of infrastructures (railway and development of an intermodal terminal) and other softer interventions (in particular grant schemes for private companies) in order to capture a larger share of goods going through the port, by offering other services (inland transport) or attaching segments of the supply chain (primary processing of raw materials and/or semi-finished products, assembly), which could generate value added within the territory. However, limited coordination of stakeholders with different responsibilities and interests, and the lack of a strong and long-term political support prevented from taking full advantage of the socio-economic opportunities that a promising business idea such as Contship’s one was expected to produce.

This interesting case history highlights the importance of soft dimensions, especially the institutional capacity and governance structure, over more technical aspects for the success of a large infrastructure project. Indeed, while technical expertise and private entrepreneurship are relatively easily available on the market, political commitment, entrepreneurial capacity in the public sector and coordination mechanisms are much rarer conditions.

List of references

- Aschauer, D.A., 1989, 'Is public expenditure productive?', *Journal of Monetary Economics*, 23, 177-200.
- Barro, R.J., 1990, 'Government spending in Simple Model of Endogenous Growth', *Journal of Political Economy*, 98, 103-125.
- C-LOG, 2008, Analisi delle opportunità logistiche dell'area retroportuale di Gioia Tauro (Analysis of the logistic opportunities of the area of Gioia Tauro), Technical report, Project OSMETE – Centro di Monitoraggio e Osservatorio Tecnologico, 29 January 2008.
- Committee for the coordination and development of the Gioia Tauro area, 1997, *Nota per il Signor Presidente On. Romano Prodi, Dossier Gioia Tauro: Attività in Corso e Primi Risultati; Nuove Iniziative di Sviluppo e Master Plan; 2° Fase della Programmazione Negoziata*, Department of Economic Affairs - Council of Ministers, December 1997.
- De Rus, G., C. Romàn and L. Trujillo, 1995, 'Convergencia en infraestructuras de transporte', *Economistas*, 64, 563-570.
- Del Bo C., Fiorio C. and Florio M., 2011, 'Shadow Wages for the EU Regions', *Fiscal Studies*, Vol. 32, No 1, pp. 109-143.
- ESPO European Sea Ports Organisation, 2010, *Fact findings survey 2010*, http://www.espo.be/index.php?option=com_content&view=article&id=126&Itemid=86
- Eurispes, 2010, Prevenzione e Sicurezza: tra crescita economica e qualità della vita. Available at: http://www.eurispes.it/index.php?option=com_content&view=article&id=1503:cagliari-gioia-tauro-e-taranto-60-milioni-di-euro-in-5-anni-per-salvare-piu-di-9000-posti-di-lavoro-a-rischio&catid=40:comunicati-stampa&Itemid=135
- European Commission, 1996, *Expertise sur le Grand Project "Porto di Gioia Tauro*, DG XVI – Regional Policy and Cohesion Rome, February 1996.
- European Commission, 1999, *Grande Progetto Gioia Tauro, Rapporto finale di esecuzione* (Final Implementation Report), vol. I, 30 July 1999.
- Flyvbjerg, B., Bruzelius, N. and Rothengatter, W., 2003, *Megaprojects and Risk: An Anatomy of Ambition*, Cambridge: Cambridge University Press.
- International Bank for Reconstruction and Development, 2009, *Freight transport for development toolkit: Ports & Waterborne Freight*, The World Bank, Washington D.C.
- Martin, P., 1997, 'Can regional policies affect growth and geography in Europe?', *World Economy*, 21, 757-774.
- UNCTAD, 2010, Review of maritime transport, United Nations publication.

Some of other papers and reports consulted

ESPO European Sea Ports Organisation, 2006, A future maritime policy for the European Union. First response on the Green Paper of the European Commission, Brussels, 21 September 2006.

Migheli M., 2009, 'Il porto moderno: confronto tra Genova e Rotterdam tra possibilità di sviluppo e vincoli fisici', *Economia Pubblica*, 3-4, pp. 153-170.

OECD, 2010, Agenda Item 8.4: Trade and the crisis. Infrastructure: Recent developments and outlook for traffic flows and capacities, powerpoint presentation available at: www.oecd.org/dataoecd/55/31/44197713.ppt.

Oum T.H. and Waters W.G. II, 1996, A survey of recent developments in transportation cost functions research, *The Logistics and Transportation Review*, 32 (4), pp. 423-463.

Some of other project documents consulted

ASI-REG Consorzio per lo Sviluppo della Provincia di Reggio Calabria, 2011, Opere già finanziate. Agglomerato di Gioia Tauro, Rosarno, San Ferdinando, Reggio Calabria, 25 January 2011.

ASI-REG Consorzio per lo Sviluppo Industriale della Provincia di Reggio Calabria, 2010, Agglomerato Industriale di Gioia Tauro, Rosarno, San Ferdinando. Variante Piano Regolatore Territoriale, September 2010.

ASI-REG Consorzio per lo Sviluppo Industriale della Provincia di Reggio Calabria, 2009, Piano degli interventi infrastrutturali per lo sviluppo della II zona industriale e delle aree consortili connesse al Piano di Sviluppo Strategico per l'area ampia di Gioia Tauro, 31 March 2009.

ASI-REG Consorzio per lo sviluppo Industriale della provincia di Reggio Calabria, 2010, Elenco ditte insediate - Agglomerato Industriale di Gioia Tauro - Rosarno - San Ferdinando, 30 September 2010.

ASI-REG Consorzio per lo sviluppo Industriale della provincia di Reggio Calabria, 2009, Elenco ditte insediate all'interno del verbale di delimitazione - Agglomerato Industriale di Gioia Tauro - Rosarno - San Ferdinando, 26 June 2009.

ASI-REG Consorzio per lo sviluppo Industriale della provincia di Reggio Calabria, 2007, Elenco aziende in esercizio - Agglomerato Industriale di Gioia Tauro - Rosarno - San Ferdinando, June 2007.

Booz-Allen-Hamilton, 2007, Feasibility study for Gioia Tauro, 22 January 2007.

Camera dei Deputati, Senato della Repubblica, 2008, Commissione parlamentare di inchiesta sul fenomeno della criminalità organizzata mafiosa o similare, Doc. XXIII, N. 5, 20 February 2008.

CGIL Piana di Gioia Tauro, 2011, Letter to the President of the Italian Republic, Gioia Tauro, 13 June 2011.

C-LOG, 2009, Analisi tecnico-economica delle applicazioni innovative nel settore della vehicle logistics a Gioia Tauro, Technical report, Project AUTOMA - AUTOmobile logistic MAnagement, 30 June 2009.

Contship Italia Group, 1994, *Medcenter Container Terminal di Gioia Tauro*, Gioia Tauro, 1994.

Contship Italia Group, 2010, ContshipWINDow, journal of the company, July 2010.

Contship Italia Group, 2011a, *Milano, Gioia Tauro 10/1/2011*, press release, 10 January 2011.

Contship Italia Group, 2011b, ContshipWINDow, journal of the company, February 2011.

Crudo C., 2006, I flussi di merci nel porto di Gioia Tauro, Technical document, Project OSMETE – Centro di Monitoraggio e Osservatorio Tecnologico, 20 August 2006.

Deloitte & Touche, 1994, Contship Italia S.p.A. and Subsidiaries. Consolidated financial statements as of December 31, 1993, allegato alla domanda di finanziamento (attachement to the application form), Roma, 25 July 1994

European Commission, 1999, Grande Progetto Porto di Gioia Tauro, DG XVI – Regional Policy and Cohesion, Brussels, 24 September 1996.

European Commission, 1999, n° FEDER 94 05 03 001. Demande de paiement du salde final du Grand Project du "Porto di Gioia Tauro", DG XVI – Regional Policy and Cohesion, Brussels, 14 September 1996.

European Commission, 2003, Porto di Gioia Tauro- Stralcio sentenza del 23 Maggio 2000, OLAF Anti-Fraud Office, Bruxelles.

European Commission, Italian Republic and Calabria Region, 2012, POR Calabria FESR 2007/2003 – Information sull'APQ Polo Intermodale di Gioia Tauro” Punto 8 all'ordine del giorno del V Comitato di Sorveglianza, Catanzaro, 19 June 2012.

European Commission, Italian Republic and Calabria Region, 2013, POR Calabria FESR 2007/2003 – Information sull'APQ Polo Intermodale di Gioia Tauro” Punto 5 all'ordine del giorno del VI Comitato di Sorveglianza, Catanzaro, 21 February 2013.

Ferrovie dello Stato, 1996, Il collegamento ferroviario del porto di Gioia Tauro, Rome, 13 November 1996.

INGECO, Convenzione attuativa dell'accordo di programma "Gioia Tauro" tra il Ministero del Bilancio e della Programmazione Economica, Contship Italia spa e Medcenter Container Terminal spa. Monitoraggio degli investimenti. Stato di avanzamento lavori, Rome.

Italian Government, 1994, Legge 28 gennaio 1994, n. 84 e successive modificazioni. Riordino della legislazione in materia portuale, Rome, 28 January 1994.

Marconsult s.p.a., Ocean Shipping Consultants Limited, 1993, *European Sea Port Policy*, Genova, 1994.

MCT Medcenter Container Terminal, 2009, *Sulla stessa barca*, Company's journal n. 5, May 2009.

MCT Medcenter Container Terminal, 2009, *Sulla stessa barca*, Company's journal n. 6, October 2009.

MCT Medcenter Container Terminal, 2010, *Nota sulla cassa integrazione*, press release.

MCT Medcenter Container Terminal, 2011, *Sulla stessa barca*, Company's journal n. 1, March 2011.

Mediterranea Sviluppo, 1999, Proposta di sovvenzione globale: Promozione di PMI nell'area di crisi di Gioia Tauro.

Mediterranea Sviluppo, 2002, Rapporto finale di esecuzione al 31.12.2001: Sovvenzione Globale Promozione di PMI nell'area di crisi di Gioia Tauro, Reggio Calabria, Dicembre 2002.

Ministry of Budget and Economic Planning, 1994, Fondo Europeo di Sviluppo Regionale. Domanda di finanziamento: Realizzazione di un Porto di Transhipment di contenitori in Gioia Tauro (TGT), Rome, 25 July 1994.

Ministry of Transport, 1997, *Le linee guida per il Master Plan di Gioia Tauro*, Reggio Calabria, 28 April 1997.

Munari T., 2010, Interview to the Special Commissioner of the Government R. De Dominicis, Calabria, 31 January 2010.

Napoli A., 2008, Interpellanza parlamentare, Porto di Gioia Tauro, available at: http://www.criminologia.it/antimafie/porto_di_Gioia_Tauro.htm.

Purarelli S., 2008, Rodolfo De Dominicis: Gioia Tauro, grande occasione di sviluppo, Interview to the Special Commissioner of the Government, available at: <http://www.specchioeconomico.com/200806/dedominicis.html>.

Regione Calabria, 1998, P.O.P. 1994-99 - Scheda informativa ed analisi economica del progetto di realizzazione di un interporto a Gioia Tauro.