

TRANSPORT AND LOGISTICS IN THE DEVELOPMENT PROCESS OF THE MEDITERRANEAN COUNTRIES

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1. Foreword

In recent years, it is forming a "conflict" between traffic flows and points of generation and destination of movements of passengers and goods that logistics still can't manage!

On a global scale, the economies that generate these conflicts are schematically defined as follows:

- **North America** - Area with a strong research and innovation with high value-added production and markets with high consumption
- **Northern Europe** - Area of value-added production and consumer markets
- **Euro Asiatic area** given by Middle-Eastern Countries - Arab Emirates - Area with a strong presence of oil and natural gas
- **African continent** - Area with the largest deposits of raw materials (minerals)
- **Far East** - Area of production with low labor costs and strong financial surpluses
- **Italy** tries to position itself in the new geography of development as a production area with facilities for SMEs and as area of consumption with strong advantages for the geographic positioning inside the trading market.

We verified, after evaluations and audits on the documentation, the context outlined, and the possible scenarios that can happen in the coming months about the evolution of traffics in the field of transport and logistics on an international and global scale, we were able to verify that the results given by the application of econometric models in 2008 in order to define the scenarios from 2020 to 2030, were, compared to the actual data, completely unrealistic!

The greater disappointment came not just from the results themselves, but from observing that the parameters at the base of the model results were highly restrictive in explaining complex phenomena such as a process of economic globalization.

It is now becoming increasingly clear the "fracture" between the methodologies developed and the complex economic issues that need to be represented.

The variables with most impact on the premises of the economic cycles that, in turn, are becoming shorter and interrelated are:

a) Population

Demographers point out that the official statistics count 7 billion people worldwide. Estimates made on the basis of consumption in the different continents and the migrations driven by the big megalopolises, count approximately 1 billion people (value rounded down) more than the official report. The "rate" of greater demographic deficit are found in China, India, Africa, Latin America.

b) Energy and energy consumption: from oil to natural gas

Despite the "green" politics, oil needing continues to grow parallel to the resource depletion. This brings to a price of oil, on global scale, subject not only to the market's logic, but used as a tool of "political pressure" by producing Countries against consumer ones.

c) International finance and financial flows

Producing Countries with low labor costs, very high productivity levels for labor and capital and the ownership of energy assets (China, Brazil, India, Russia, etc.) have used financial surpluses to support the public debt of Countries not producers anymore, but consumer ones, such as North America and Europe. The movement of financial flows, even if minimal, from one Country to another could lead to instability processes such as to put a strain on the economies of many Countries, creating also complex geopolitical situations.

d) Research and innovation

The field of research and innovation, both on side of private companies and on side of public policies, is depleted by the scarcity of resources, but also due to the halt given to the sector by the low predisposition to invest during a time of severe economic crisis and shortage of private funds.

Some production lines are outdated for the new consumers' demands. This is the case of automotive and other mature industries such as air and rail.

This situation is further worsened by "conflicts" that are happening among the specified sectors in the world-wide delicate balance, where the economic-financial system is more and more harsh to govern even if control and/or support institutions are set up for those Countries struggling to find a new growth cycle.

In this macroeconomic context, the economic cycles are getting shorter. The duration of a business cycle over the past 10 years has lasted, on average, 3 years and a half.

This fluid and cyclical economy fails to consolidate a worldwide logistics system capable of monitoring and improving the geography of trade and the positioning of the operators.

The crisis of the economy is now every day more clear; industry analysts give us a clue, with all due respect, a little short-sighted and only concerning the internal market.

Some corrective policies have been identified to define a market for transport and logistics more balanced in the different modalities, more competitive in productivity, more transparent in the supply-demand relationship, but it still lacks a strong political direction!

The experts believe that the issue of logistics and cargo transport, and even more the mobility, are usually perceived as a "nuisance" and not as a real factor of development.

Yet the level of internationalization of the enterprises is more than good.

The Italian economy for the "made in Italy", and the ability of its operators, still holds a high level of exports.

Exports support the Italian economy with a net positive balance on energy products, and with a great degree of "openness" on a global scale.

The analytical indices that measure worldwide competitiveness for some economic sectors, such as transport and logistics, give us a little regression about our ability to compete, measuring the overall productivity of the system in a somewhat aggregate way.

If we disaggregate the export data for the number of relationships we have with the "world" outside, and for the value of trade, the result is that we are at the 12th place in the world for number of relationships and ability to hold the exchange relations, but we go back to the 22th place in intensity and value!

We need to work alongside the operators to provide them less generalist interpretations, but also to stimulate and create a new way of doing business, thinking a new model of service management, especially for large international players.

One of the critical points is certainly the theme of customs in Italy that significantly slows down the competitiveness of our ports, airports, freight villages; but are customs the only culpable?

We believe that, more than customs, it's a system of controls' global fault: 73 planned operations and 16 different bodies involved in the monitoring and control of operations.

This mechanism so bureaucratized imply a good's delay of 10 days for exports and 9 days for imports.

Having compared timing and behaviors of the Italian public policies with other Countries, it is clear that:

- In Germany and the Netherlands for the control duties the times are reduced by 2/3 than those recorded by our operators.

- logistics is at the 3rd place among the economic sectors, vice versa in Italy it loses 40 billion Euros per year.
- knowledge of new markets, new business opportunities, are primary elements to improve the competitiveness of the sector companies.

We need to expand the framework of knowledge following the operators, especially those that operate in Countries that are not "historical" but have seen a sharp increase in trade, as the Balkans, the Mediterranean African Countries, the Middle Eastern Countries.

It's needed a timely and accurate picture of the weaknesses and strengths in our trade, in particular in the Mediterranean.

2. The euro Mediterranean context and the positioning of Italy

The Country as a whole has so far underestimated the strategic role of ports for the economy and the mobility of the entire system: without ports or, indeed, without efficient ports, Italy will not be able to rely on one of its more important features: the geographical location together with the close relations that its economy has tightened, and is starting to tight, with other areas of the world.

The ports' network, as well as the role of the ports in the field of energy supply, territorial continuity, links with the Balkans and the Iberian Peninsula, is quite present in the common consciousness, together with their importance to the tourism industry. What is hard to be perceived is the role that ports have inside the new structure of the global economy; Italy is always told being a "*natural logistics platform in the middle of the Mediterranean*" but this slogan requires appropriate and correct policies in short.

Foreign trade of our Country in the European market, net of energy supply, is still for the 70% bound to the fate of Europe, the European Union, the euro area. In such a configuration modes are overwhelmingly prevalent in the terrestrial ones.

A new challenge arises for our Country: to adapt its logistics system starting from the road and rail infrastructure, with particular regard about the port facilities, so that it can represent an alternative outlet to northern European ports for the traffic generated by the economies of Central Europe. The European Union is pushing in this direction, putting primary emphasis, among the European rail corridors for freight, on the Rotterdam-Genoa (see the decision of the EU Regulation 913/2010, published in the EU Official Journal L276 of 20.10.2010).

Environmental considerations endorse this approach and the market will have to take them into account. *A container which, after passing through the Suez Canal, reaches the European market through the Italian ports, and then by rail, produces*

less CO2 than the same container that arrives through the ports of Northern Europe.

Second aspect: as the unexpected resumption of maritime traffic in the first half of 2010 demonstrated unequivocally, the world economy will be driven by Countries like China, Brazil, India; Italian industrial districts and the manufacturing system as a whole have significant potential in these markets, where the overall incidence in the interchange of our Country is expected to increase. On these lines, the mode of transport with overwhelming prevalence is maritime.

The third key aspect is, in turn, what concerns the Mediterranean, where it is necessary, in the logic of the national and Mediterranean widespread network, and accordingly with the Community directives in the sector, to strengthen the ways of the sea by leveraging and enhancing the national shipping that exactly in the Short Sea and the RO/RO services of the Motorways of the Sea is a leader in Europe and the World.

The Mediterranean basin is a natural infrastructure at no cost on which passes the 19% of the world traffic and where there are as many as 80 ports of international importance. A basin that spans 25 Countries on three different continents and that in 2020 will represent a potential market of 525 million people. It's often said that the ports of North Africa are a danger for the rapidity with which they have built their infrastructure, and their labor costs lower than ours. There is no doubt that if, from the trade point of view, they are an opportunity for cooperation, on the other hand, with regard to the transshipment market, they represent a strong element of competition and threat to the Italian ports (Europeans).

But we must be aware that the North African coast and the Asian Countries of the Eastern Mediterranean (primarily Israel and Turkey) may represent the third important pillar of our foreign trade by sea. North Africa should be thought of as an opportunity, not a threat. That's witnessed by the many Italian companies that have invested in the area. And it's witnessed above all by the Italian commercial fleet, which is already the second world fleet for ferries and is continuing to invest heavily in new ships that represents a transport hub of excellence: taking into account just the RO/RO cargo and/or passengers line traffic, there are currently over 450 weekly departures, served by more than 100 vessels that connect the Italian ports with other ports (domestic or foreign) in the Mediterranean.

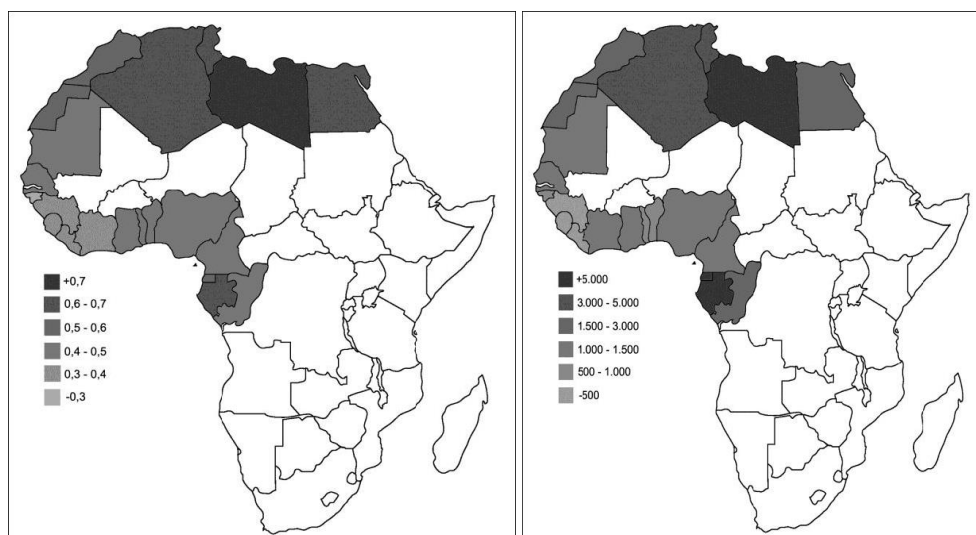
The four pillars of future development are: an alternative to the ports of northern Europe, increasing the share of intercontinental trade, development of infra-Mediterranean traffic, growth of the maritime connections domestic as an alternative to the all-road. That requires therefore to focus on four types of actions. Being understood the need to maintain the highest level of efficiency (or reclaim at least the efficiency margins eroded by the substantial elimination of the

maintenance resources) for the port facilities with more traditional activities in the service of production facilities, which constitute the basis for the industrial activity, and activities related to the cruise business. The before mentioned four areas of implementation are:

1. The ports of final destination, in the multi-port logic, northern Tyrrhenian and Adriatic, which are the ones best positioned to intercept the traffic flows routable from the Mediterranean to Central Europe;
2. The seaports, also coincident with those in service for big areas of consumption, which own international lines;
3. Airports with large shares of transshipment traffic;
4. The lattice of nodes port terminal for infra-Mediterranean and national connections.

The first consequence of this approach is about the concept of competitiveness: *this can't be limited to the efficiency of port operations but must include the entire supply chain until the end user*. Italian ports may have handling or technical-nautical services' costs inferior to those of Antwerp and Rotterdam, may have comparable depths, but *as long as the logistics system will not be able to offer a competitive systemic cost, shore to the end user and vice versa, comparable to that of those Countries in terms of port infrastructure, network connection, suitable joints behind, timing of completion of the import and export procedures, it will always be out of the game or it will just continue to play mostly a regional role.*

Figure 1 – Demographic and macro-economic features



A work framework on the expansion of the European exchange lines can be provided by a prospective analysis of the North and Equatorial Africa, in particular with regard to the Mediterranean and Atlantic Countries¹.

The human development indicators (HDI 2010) and GDP per capita outline the following macro-economic features:

The areas with the highest degree of socio-economic development are the Mediterranean Countries and the area of oil in Equatorial Guinea and Gabon.

Despite the maritime trade for the area in question is concentrated in relatively few ports (about a dozen), their share of the world total is estimated to vary between 25% and 30%. This fee, of absolute importance, is played mostly in the Mediterranean, and particularly in the ports of Libya and Egypt. At a commodity level, the exchange concerns mainly energy products (concentrated in the southern Mediterranean) and metallurgical (concentrated in Mauritania, with the 77.4% of the total trade of the study area).

The Countries that offer the best development prospects, with all the cautions for the future outcome of the recent political developments, are therefore those of the Mediterranean. These Countries in fact, in addition to the relative goodness of their socio-economic indicators, already benefit from better infrastructural facilities for ports and industry. In second place there is the interesting case of Equatorial Guinea, which could become a major oil terminal in the short, sealing a place without equal in terms of wealth per capita in all of Black Africa. Similar developments or derivatives, although in a minor key, might be expected in Congo and Gabon. Finally, much in the background, new prospects for trade could open up with Senegal, Ivory Coast, Ghana, Nigeria and Cameroon, once improved their infrastructure delay.

2.1. Italy in the Mediterranean: Italy's position in relation to its European competitors

The trend of the interchange (import + export) between the Mediterranean Countries in the last decade grew roughly constantly for all EU Countries (apart from the widespread collapse of 2009)². The data is segmented considering in particular three main maritime regions of non-EU Countries:

- **South Med** (Morocco, Algeria, Tunisia, Libya, Egypt)
- **East Med** (Israel, Lebanon, Syria, Turkey)

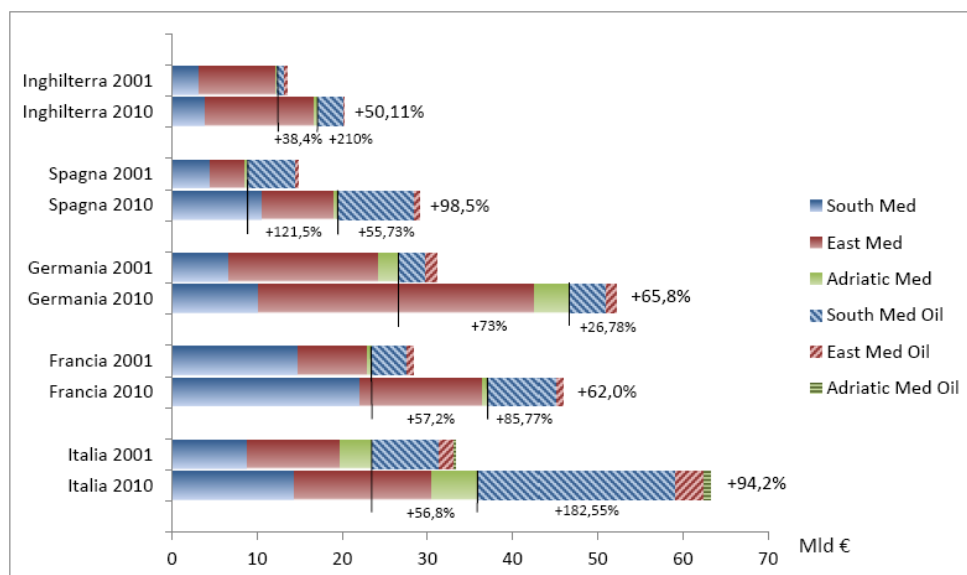
¹ All sources: a study from the University of Bari for the Advisory Council for Road Transport and Logistics.

² All sources: "The economic relations between Italy and the Mediterranean - Annual Report 2011", SRM, 2011.

- **Adriatic Med** (Albania, Bosnia, Croatia)

Is given hereafter a pattern that highlights the interchange, distinguishing one related to energy products (parts streaked) from the rest of the traffic. There are given the percentage changes of the parties and of the total. The following diagram shows the absolute value of the interchange (in billion):

Figure 2 – Interchanges Mediterranean areas and major European Countries



In absolute terms, Italy is the Country that recorded the strongest growth, rising from € 32.6 billion in 2001 to € 63.3 billion in 2010 (+ 94.2%), with a huge contribution from the interchange of energy products, that in Italy hold the largest share of traffic in absolute terms (€ 27.38 billion, 43.3% of all interchange Italian-Mediterranean).

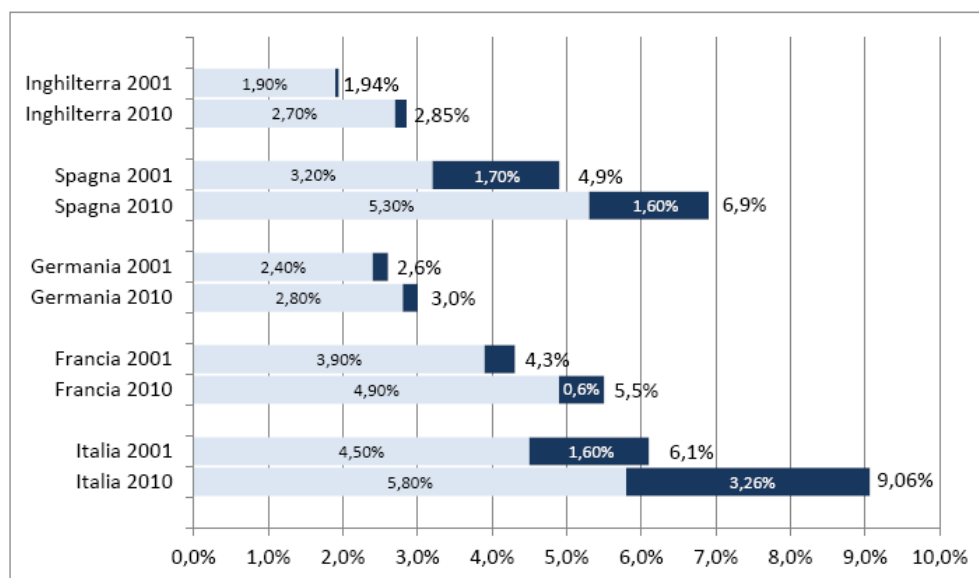
In relative terms, Spain is having the most significant growth, increasing from € 14.88 billion in 2001 to € 29.03 billion in 2010 (+98.5%), surpassing England in the units of traffic. This result is mainly given by the "non-oil", that in Spain has the highest relative growth (+121.5%). It should be noted, however, the weight of the oil (9.56 billion €, 32.6% of the entire Spanish Mediterranean interchange).

In absolute terms, Germany has the largest share of 2010 interchange net of energy products (€ 46.61 billion), confirming the primacy for this segment in 2001 (at the time, with € 26.7 billion). England on the other hand marks the greatest relative growth for energy products (+210%), even if confined to minimal levels in

absolute terms (3.1 billion € Total: lower even than Germany, which counts 4.5 billion €).

The South Med emerges from this scheme as the main interlocutor for energy products, leaving this sector a limited role to the other Mediterranean areas. Its market share is predominant in France, Spain (since 2010 also excluding energy products) and Italy (considering gross energy products). The exchange of petroleum products in 2009 in the area was distributed as follows: 35 146 t Libya, Egypt 21,150 t, 3,437 t Algeria, Tunisia 1,203 tonnes, 216 tonnes Morocco.

Figure 3 – Interchanges between the major EU countries and the rest of the World



The East Med is the area that, not to mention energy products, records the highest growth rates in all EU Countries. This is also the reference area for England (representing 64.3% of all its Mediterranean interchange) and Germany (62% of all its Mediterranean interchange).

The Adriatic Med is an area altogether marginal, mainly in relation with Italy and Germany. Its impact on the EU energy market is almost nothing (only Italy has recorded some barely visible portion).

Comparing this data to the total interchange of the various EU Countries with the rest of the world, we can better quantify the importance of the Mediterranean in the overall framework. The following scheme will give the percentage values of this relationship, distinguishing the part of energy products (darker).

The digits of the energy interchange (attested to a maximum of 3.26% of the interchange Mediterranean) should not mislead: the weight of the Mediterranean in

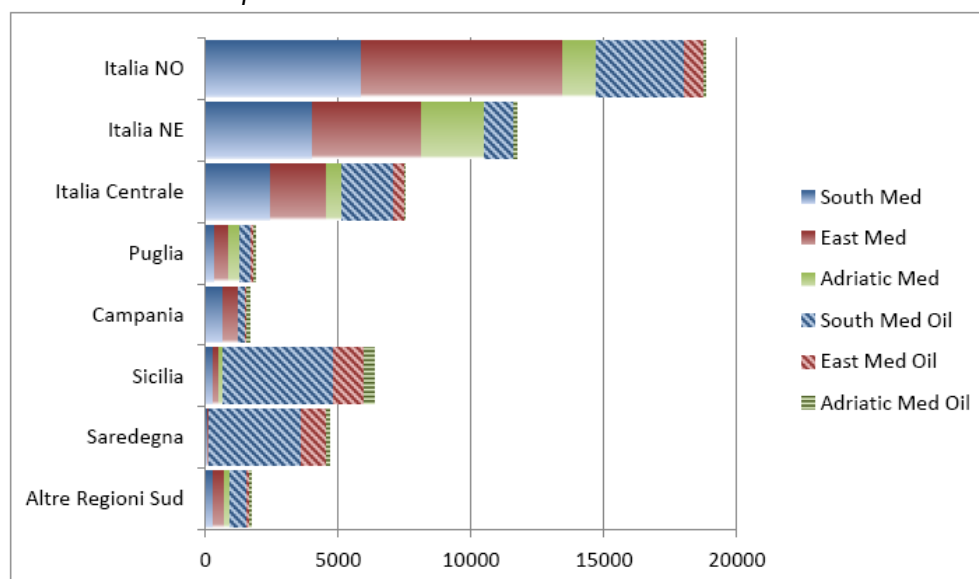
relation to the global energy interchange, even though in slight decline, is indeed very relevant. In particular, the ratio Mediterranean/rest of the world is: Italy: 31.9%; France: 11.6%; Germany: 5.1%; Spain: 20%; England: 3.6%.

2.2. The regional detail: the flows distribution and the role of Southern Italy

For Italy, the aforementioned 63.3 billion € of Mediterranean interchange in 2010, € 54.2 billion are attributable to specific regions (€ 34.6 billion + € 19.6 billion oil). In particular, the values, as distinct from energy products (darker) are broken down (in millions of €)³.

The area that totals more traffic quotas is NW Italy, with € 19,260 million. This is also the area that shows overall (oil or not) the most intense exchanges with the South Med (€ 9,290 million) and the East Med (€ 8,607 million). Following, NE Italy with € 12,185 million. This is also the area that records the most intense exchanges with the Adriatic Med (€ 2,639 m). The weight of Southern Italy (Apulia, Campania, Sicily, Sardinia, Other) in Italian-Mediterranean exchanges is 28.3%, more than twice its weight in trade between Italy - rest of the World. This indicates the importance of the Mediterranean for the South Med.

Figure 4 – The distribution of flows between different areas of the Country and the areas of the Mediterranean



³ All sources: "The economic relations between Italy and the Mediterranean - Annual Report 2011", SRM, 2011.

The total exchange is therefore distributed as follows:

Italia NO	Italia NE	Italia Centrale	Sicilia	Sardegna	Puglia	Campania	Altre Regioni Sud
35,3%	22,3%	14,2%	11,7%	8,5%	3,4%	3,1%	1,5%

Note the role of Sicily and Sardinia in the energy interchange (mainly South Med), due to the specializations of the energy ports of Augusta and Cagliari. Net of energy interchange, their values plummet to low levels of traffic. In particular it would be:

Italia NO	Italia NE	Italia Centrale	Sicilia	Sardegna	Puglia	Campania	Altre Regioni Sud
42,7%	30,4%	15%	1,9%	0,4%	3,8%	3,8%	2,1%

Italy NW is also confirmed in the net of energy the overall leader with € 14,723 million as well as the first partner for South Med (€ 5,876 million) and East Med (€ 7,587 million). Following NE Italy with € 10,485 m. It also confirms itself first partner for the Adriatic Med (€ 2,356 million).

Considering instead only the trade in energy, we would have the following scheme:

Italia NO	Italia NE	Italia Centrale	Sicilia	Sardegna	Puglia	Campania	Altre Regioni Sud
21%	6,1%	12%	29%	23%	3%	2,2%	4%

The area that totals more traffic quotas is then Sicily with € 5,673 million. Sicily is also a key partner for both the South Med (€ 4,189 million), the East Med (€ 1,152 million), and for the Adriatic Med (€ 332 million). Within the energy interchange Sicily and Sardinia together account for roughly 93% of all Southern Italy in all areas of the Mediterranean. The composition of energy trade (except approximately € 1 billion "lost" in the data) is strongly biased towards imports (73.14% of the interchange in question), with exports mainly (84%) entrusted to the regions of Southern Italy. In particular, the Central-Northern Italy and Southern Italy import respectively 6.1 and 6.1 billion € from the South Med (89.57% of imports); 0.8 and € 0.5 billion from the East Med; 0.1 and € 0.02 billion from the Adriatic Med. Exports for the same areas instead applies: 0.2 and € 2.2 billion for South Med (48% of exports); 0.3 and € 1.7 billion for the East Med; 0.02 and € 0.4 billion for the Adriatic Med.

Taking into account the difference of about € 8 billion "lost" in the transition from national to regional data, it is confirmed that the share of trade in energy between Italy and the Mediterranean, in relation to the rest of the world has been gradually reduced (while increasing volumes traffic) from 36.5% in 2001 to 29.5% in 2010 (similarly Southern Italy has gone from 45.8% to 32.2%).

The manufacturing sectors more interested in the Mediterranean interchange are textiles, metals, chemicals, transport equipment. The highest value of interchange

is given precisely by the textile industry, with about € 6 billion. Followed by metals (€ 4.8 billion), and chemistry (€ 3.3 billion). By segmenting the data we have:

- **South Med:** textiles (€ 2.6 billion), metals (€ 2.2 billion), chemicals (€ 1.1 billion).
- **East Med:** transport (€ 2.8 billion), textiles (€ 2 billion), metals (€ 1.9 billion), chemicals (€ 1.8 billion).
- **Adriatic Med:** textiles (€ 1.4 billion), metals (€ 0.7 billion), chemicals (€ 0.4 billion), transport (0.3 billion €).

3. Conclusions

The data and information collected give us a clear picture of the "health state" of our trade economy in the Mediterranean.

We believe that for the next 10-15 years, the African continent, in particular the Mediterranean Africa, will have a significant development for the richness of raw materials and the geo-economic and geo-political positioning.

In this context, why don't we think of an ambitious project?

Making a big "front port" which runs from Messina to Pachino in Sicily, specializing the ports there present. In this context, comes back the theme of the bridge across the Strait of Messina.

Acknowledgments

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SUMMARY

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This fluid and cyclical economy fails to consolidate a worldwide logistics system capable of monitoring and improving the geography of trade and the positioning of the operators.

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