

Context and objectives

The city-port relations and particularly waterfront redevelopments are still popular and part of the planning agenda in most countries in Europe. The literature on these subjects, particularly the latest, is rather rich and diversified. Nevertheless, few attempts have been made to provide a truly comprehensive view of the most significant projects and respective impacts, outlining the main reasons behind successes and failures of port infrastructure changes and waterfront redevelopments.

These development projects are frequently designed and implemented in a complex context characterised by frequent territorial disputes and institutional conflicts between port and city authorities, leaving out of the equation common interests, other stakeholders and the links between them (Ducruet, 2011). For years, at the technical level, urban planning and port management largely ignored each other, the former, a field of work for planners, urban designers and architects, while the later, a professional specialization for engineers and managers alike.

Our theoretical framework is structured on these two perspectives presented in the following sections. Our research objectives are twofold:

- building on the extensive planning research on city-port relations and waterfront development in order to explore further the nature and extent of city-port interactions through a case study approach;
- contribute to the design of responsive planning policies applied to waterfront regeneration projects in small and medium size cities with sea and river ports.

Cities with ports: the urban planning perspective

Some of the most frequently quoted planning views on port waterfronts deal with downsizing, closure or migration of the port out of the city which are generally seen, not as a threat to the city but rather as an opportunity for investment and redevelopment (Borruey and Fabre, 1998), coupled, sometimes, with planning objectives to revitalise the inner city (Hall, 1993). In fact, city priorities, though recognising their links to the port, are mainly concerned with the development of their local and regional communities (Hoyle, 2011). Often, these planning objectives aim at turning the former port area from the backside of

the city to its forefront, to constitute the new *showroom* of the new *urban marketing*, so popular in post industrial times of increasing inter-city competition (Ferras and Volle, 1993).

The local conditions for urban economic development and the current business climate shaped, to a large extent, waterfront redevelopments. These were not immune to the general shift from mass production to consumption, leisure and recreation, as well as to the preference for public-private partnerships, priority to large-scale urban events and investments and market-oriented redevelopment schemes (Hall, 1993). Nowadays the European economic system is facing a serious crisis that is encouraging a steady return to industrial production, particularly in tradable and exportable goods.

Also, the widespread concern over environmental quality issues tended for a long time to portray the port as an important negative impact factor. This was true in the past but is seldom true in present times, in particular in ports that underwent massive capital investments and modernisation programmes.

Another generalised idea, particularly in cities with ports right in their inner city areas is to project the port as an element of instability, disorganisation and urban discontinuity (Cau, 1996). Current planning policies in favour of inner city regeneration tend to devalue the importance of the port as an element of the city's competitive advantage, leaving behind that port spaces should preferably be used to water related uses: the keyword is revitalisation not regeneration (Alemany, 2011). And yet, the symbolic function of the port image has usually been recognised as a strong point of reference of the cities' identity (Mathé, 1992). Indeed, a structural component of the city, at least in the past.

Nevertheless, it is generally recognised that economic transformations are weakening the mutual identification of cities and respective ports – each increasingly integrate separate, and globalised, networks. In other words, city and port economic development is increasingly perceived as less interdependent today as compared to some decades ago. The new challenges in the production structure will place new challenges to cities and their economic functions and to their coexistence with the ports (Bruttomesso, 2011).

As a critical balance of the impacts of waterfront redevelopments on cities and ports we would like to stand out the following common ideas:

- recognition of a certain euphoria throughout the 1990s (and also 2000s) with unrealistic expectations, uneven local economic development, inner city blight, migration of services,

underutilized property, market speculation, gentrification (Jauhiainen, 1995);

- concern with local economic and political particularities, search for social consensus and smaller scales of intervention, preference for incremental processes of implementation, and promotion of new forms of public participation and negotiation (Portas *et al*, 1998);

- agreement that some waterfront projects paid insufficient attention to the historic social and economic relations between cities and ports, and to the physical rehabilitation and economic revitalization of traditional ports and port related activities.

Ports in cities: the port management perspective

Port managers proudly emphasise the unprecedented technological and management innovations that took place over the last decades (Stopford, 1997), and that have been able to shape new ports with new economic roles in cities, metropolis and wider regional hinterlands. For a port manager or port engineer the port became a capital intensive enterprise (Hayuth and Hilling, 1992), promoting wider partnerships with the business community and generating its own added value - *goods handling and processing* - and not just performing the traditional transport function (Vallega, 1996). In this way, the modern seaport is seen as a gateway between economic regions rather than as the traditional central place of the past (Bird, 1971 and Hoyle and Pinder, 1992).

Productivity is the key word in port business, an important part of the highly competitive market of global transport. Connectivity (sea-land), vital nodes, networks and specialization (Robiglio, 1996) are just some other keywords of this business. Downsizing, ports' merging and consequent closures are signs of progress and not of decline. The widening of activities, often to areas outside their facilities, involves investment in intermodality (Llaquet, 2011) and efficiency in the supply chain both in sea and in land (Vásquez, 2012).

In parallel with these technological (if not technocratic) views, port officials stress the relevance of port and marine history and culture, often times overlooked in current city planning. They point to the importance of the port heritage for the city fabric and identity.

In addition, they regard the port as a scarce natural resource, from a physical point of view, and as an important capital investment asset. Nevertheless, they (port officials) recognise that, these days, port authorities are very often in between financial autonomy and privatisation, compelled to enter into the property market to balance current costs and

profits in an increasingly competitive world. In the present economic scenario, the port infrastructures position in the supply chain has been reinforced and the efficiency of their management systems is enabling their financial sustainable development.

The recent literature on port management and development seems to recognise, generally speaking, the following critical aspects relevant for the development of our research:

- insufficient attention paid by port authorities to the importance of the urban quality surrounding the port and of how port related activities can be transformed into new opportunities for leisure, recreation and sport open up to the city;
- lack of coordination between mid-term management plans of port authorities and strategic and land use plans of municipal authorities;
- importance of the impact of environmental policies on the transport sector, likely to favour ports' interests opening up new opportunities for short sea shipping networking, cabotage and transshipment (Stanners and Bourdeau, 1995, EC, 1997; Llaquet, 2011);
- port authorities' neglect (still evident in many cases) of the environmental impact of port operations and infrastructures particularly in zones of great environmental sensibility and risk, such as estuaries, wetlands and some stretches of the coastline vulnerable to erosion;
- and (paradoxly) tougher environmental legislation imposed on waterfront redevelopments within a context of planning deregulation and increasing reliance on market mechanisms.

Case Studies

Four case studies have been selected to analyse the changing nature of city port interactions. Two port cities are located in the Northern Region of Portugal - Viana do Castelo and Matosinhos, and the other two cases are located in the Central Region - Aveiro and Figueira da Foz. The comparative study consisted in the analysis of the port and of the respective city, through the collection and analysis of relevant planning and management documentation and a series of interviews with key stakeholders in the ports and cities administrations. The results are presented in a matrix format with variables grouped under three headings: port, city and city-port (see table below). This arrangement aimed at characterising the port and the city separately, and, subsequently, the city-port interactions

(Pinho et al, 2001).

| Table 1 | Analysis Framework | Qualifiers | Viana do Castelo | Leixões | Aveiro | Figueira da Foz | |
|---------|-------------------------------|---------------------------------------|------------------------|---------|--------|-----------------|---|
| 1. CITY | 1.1 Dimension | Small | | | | | |
| | | Medium | • | | • | • | |
| | | Large | | • | | | |
| | 1.2 Urban Dynamic | | | | | | |
| | | 1.2.1. Urban activity | Poorly consolidated | | | | • |
| | | Consolidating | • | • | • | | |
| | 1.2.2. Urban growth | Growing or Elevated | • | • | • | • | |
| | | Reduced or in decline | | | | | |
| | 1.3 Socio-economic profile | | | | | | |
| | | 1.3.1. Demographic dynamic | Reduced growth dynamic | • | | | • |
| | | Moderate growth dynamic | | • | • | | |
| | | Significant growth dynamic | | | | | |
| | 1.3.2. Services sector | Consolidated | | | • | • | |
| | | Poorly consolidated | | | | | |
| | | Consolidating | • | • | | | |
| | 1.3.3. Qualified Labour Force | Average | | • | • | | |
| | | Reduced | • | | | • | |
| | 1.3.4. Specialization Profile | Diversified | • | • | • | • | |
| | | With a tendency toward specialization | | | | | |

| Table 2 | Analysis Framework | Qualifiers | Viana do Castelo | Matosinhos (Leixões) | Aveiro | Figueira da Foz | |
|-------------------|--|----------------|------------------|----------------------|--------|-----------------|------|
| 2. PORT | 2.1. Port complex | | | | | | |
| | 2.1.1. Condition | Modern | | • | • | | |
| | | Developing | | • | | • | |
| | | Obsolete | | | | | |
| | 2.1.2. Functional Capability | Specialized | | | | | |
| | | Diversified | | • | • | • | |
| | 2.2 Hierarchy | Principle | | • | | | |
| | | Secondary | | • | • | • | |
| | 2.3 Type of Port | Fishing | | 3º | 2º | 2º | 2º |
| | | Commercial | | 1º | 1º | 1º | 1º |
| | | Recreation | | 4º | 3º | 4º | 4º |
| | | Navy Yard | | 2º | - | 3º | 3º |
| | 2.4 Commercial Function | Specialized | | • | | | • |
| | | 2.4.1. Profile | Diversified | | • | • | |
| | | | Generic | | | | |
| | 2.4.2. Market area (percent total of seaport shipping handling per market area) | National | | 11%* | 21%** | 2%** | 0%* |
| | | European | | 52%* | 38%** | 75%** | 89%* |
| Inter-continental | | | 37%* | 41%** | 23%** | 11%* | |

*1000 **1000

| Table 3 | Analysis Framework | Qualifiers | Viana do Castelo | Matosinhos (Leixões) | Aveiro | Figueira Da Foz | |
|-----------------------------------|--|----------------------------------|------------------|----------------------|--------|-----------------|---|
| 3. CITY-PORT INTER-FACE | 3.1 Associated Economic Dynamic | (Percent total for municipality) | 13,8 | 14,1 | 13,9 | 18,7 | |
| | 3.1.1 Employment (%) | Direct | 4,7 | 9,4 | 6,7 | 5,1 | |
| | | Indirect | 65,3 | 39,5 | 49,8 | 24,8 | |
| | | Induced | 30,0 | 51,1 | 43,5 | 70,1 | |
| | | | | | | | |
| | 3.1.2 Industrial Climate | 3.1.2.1. Functional profile | Specialized | • | | | • |
| | | | Diversified | | • | • | |
| | 3.1.2.2. Production capacity | Significant volume | | • | • | | |
| | | Reduced volume | | • | | • | |
| | 3.1.3 Business Climate (in support of or related to port-generated activities) | 3.1.3.1. Functional profile | Specialized | • | | | • |
| | | | Diversified | | • | • | |
| | | 3.1.3.2. Number of businesses | Elevated | | • | • | |
| | | | Reduced | | • | | • |
| | 3.1.4 Global dynamic | Significant | | • | • | | |
| | | Not significant | | | | | |
| | | In progress | | • | | • | |
| | 3.2 Strategic Planning | | | | | | |
| | 3.2.1 Articulation of strategic discourse | Exists but conditioned | | • | • | • | |
| | | Does not exist | | | | | • |
| | 3.2.2 Coordination of intervention programs | Growing | | • | • | | |
| Punctual | | | | | • | • | |
| 3.2.3 Institutional communication | Frequent | | • | • | | | |
| | Infrequent | | | | • | • | |
| 3.2.4 Institutional attitudes | Practiced with growing collaboration | | • | • | | | |
| | Indifferent | | | | • | • | |

| Table 3.1 | Analysis framework | Qualifiers | Viana do castelo | Matosinhos (Leixões) | Aveiro | Figueira da Foz |
|-----------------------|---|---|------------------|----------------------|--------|-----------------|
| 3 CITY-PORT INTERFACE | 3.3 Urban Image | | | | | |
| | 3.3.1 Common history | | | | | |
| | 3.3.1.1 Built heritage | There are cases of portuary nature | | • | | |
| | | There are acces related to the waterfront | • | • | • | |
| | | Does not exist | | | | • |
| | 3.3.2 Urban settlements or maritime communities | Exist and preserve their dynamic | | | | |
| | | Exist but are degenerated | • | • | • | • |
| | Do not exist | | | | | |

| Table 3.2 | Analysis Framework | Qualifiers | Viana do Castelo | Matosinhos (Leixões) | Aveiro | Figueira da Foz |
|--|--|--|--------------------------------------|----------------------|--------|-----------------|
| 3. CITY-PORT INTERFACE | 3.4.2 Intervention programs | Exists | • | • | | |
| | | Does not exist | | | • | • |
| | 3.4.2.2 Role in the city strategy | Central element | • | • | NA | NA |
| | | Secondary element | | | NA | NA |
| | 3.4.3 Development model | | | | | |
| | | 3.4.3.1 Environmental dimension | The port constitutes central problem | | • | |
| | | The port does not constitute central problem | • | | • | • |
| | | Environmental impacts exist | • | • | • | • |
| | 3.4.3.2 Social dimension | Port-city interface exists | • | | •* | |
| | | Port-city interface weak | | • | • | |
| | | Port-city interface less significant | | | | • |
| | 3.4.3.3 Economic dimension | Has potential | • | • | • | |
| | | Has deficiencies | | | | • |
| | 3.5 Accessibilities | | | | | |
| | 3.5.1 Marine accessibilities | Good | | | | |
| | | Poor | • | • | • | • |
| | 3.5.2 Urban road network | | | | | |
| | | 3.5.2.1 Interference with local road network | Significant | | • | |
| | | Not significant | • | | • | |
| | 3.5.2.2 Heavy traffic congestion | Exists | • | • | | • |
| | | Does not exist | | | • | |
| | 3.5.3 Connections to regional/national highway network | Active | | | • | |
| | | Deactivated | | • | | |
| Non-existent | | • | | | • | |
| 3.5.4 Connection to regional/national railroad network | Active | | | • | | |
| | Deactivated | | • | | | |
| | Does not exist | • | | | • | |
| 3.5.5 Overall integration with regional/national transportation system | Efficient | | | | | |
| | Deficient | • | • | • | • | |

Conclusions

A profound interdependent relationship between the port and the city appears to have maintained despite recent transformations on the four ports under analysis. There is a reasonable consistency between important city variables and port variables, considered separately, such as urban growth and concentrated urban population and activity versus port condition and functional capability. A look at the results suggests the conclusion that other city-port variables illustrate further this mutual dependency.

Changes in port activities and operations have weakened identifiable traces of traditional port character; however, on the other hand, they contributed to the consolidation of the local economy, busting, in particular, the service sector, with a significant growth, and the decline of industrial activity (in Matosinhos the tertiary sector represented almost 79%). Indeed, the four ports under analysis are not particularly important as direct sources of employment; however they do generate impressive volumes of indirect and induced employment, though unemployment rates have recently been growing at fast rhythm.

In the overall, recent redevelopment schemes seemed to have avoided some of the common weaknesses find elsewhere:

- small scale is certainly one of the key factors of success;
- one negative factor has been the failure to attract, on a consistent basis, water dependent and water related uses to newly regenerated waterfronts
- the transformation of port related uses should take into consideration existing factors of functional and locational dependencies long established on the city-port interface
- the environmental quality of urban surroundings is an essential factor for today's' port activities and operators
- waterfront revitalisation should paid less attention to leisure activities and more attention to quality job creation directly related or induced by port activities
- investment in the improvement of maritime accessibility and road network, in an effort to develop better logistics and efficiency in the supply chain.

Finally, strategic planning of port and city relations is above all conditioned by political forces:

- the recognition of contradictory interests should not prevent the adoption of a cooperative and collaborative participation between port and city;
- the present debate seems to overemphasise technical issues, forgetting the wider strategic and political dimension of waterfront redevelopment: common goals instead of particular interests.
- a new economic scenario is bringing a new focus on these relations in order to support the restructuring of the productive tissue.

Head Image | *The district of Viano do Castelo and the coast.*

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