

Complex Technical Management Problems At Port City Dipoles

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ABSTRACT

This study focuses on the examination of the city-port relationship from an urban planning perspective, exploring whether it can be a harmonious or a rivalry relationship and whether it can contribute to the creation of local development and national development in general. Another vital dimension considered in this study is the technical and environmental aspects that play a pivotal role in shaping the dynamics between these two entities. A port city refers to a coastal city within the boundaries of which urban and port activities are developed and carried out. Although the complexity of city port dichotomy is not captured by this definition, as it is a powerful dipole, consisting of two interdependent spatial elements, the city and the port. The strong interaction between the two creates strong spatial links that form a relationship of major importance, which has drawn considerable research attention from various fields, with urban planners in particular keenly interested in this unique category of cities.

Keywords: Port City; Technical Management; Problems At Port.

INTRODUCTION

Since ancient times, port cities have been economic and commercial centers, having developed a great commercial and economic activity based on maritime trade. This economic power enabled them to deal effectively with crises. In addition to the physical capital that port cities attract, they also attract intangible capital, such as cultural exchange, language, religion, customs and know-how, thanks to their commercial activities. As part of the city, ports make an important contribution to the city's economy and national development through an appropriate regulatory framework. Their naturally fortified areas give them a comparative advantage in terms of access from the sea, facilitating transport and promoting development and communication, thus compensating for the losses caused by the lack of an integrated road network in the hinterland. The city and the port come together with absolute precision to form

Received: 2022-12-01 Revised: 2023-02-09 Accepted: 2023-05-27 Published: 2023-08-31

a solid and unified whole, but also a self-contained environment of interdependencies, interactions and interrelationships between them. This process of assembly is essentially the genesis of the first city ports.

The primary aim of this study is to explore and analyze the city-port dichotomy, focusing on historical insights, significant European city-ports examples and the specific Greek example. To accomplish this goal, it is necessary to identify the challenges and shortcomings of the city-port system within international, European and Greek contexts. Therefore the study includes extensive analysis of the evolution of city-port bipoles, the redevelopment of port cities and the redefining of the city-port relationship, based on analytical bibliography research. After examining the relationship between port cities and the networks formed by their interaction across various European examples, the study focuses on the specific case of the city and port of Piraeus. The study is enriched by a comprehensive bibliography on the case of Piraeus, highlighting several aspects of the city-port dipole. The development of commercial activity in the port area not only strengthens the port itself, but also leads to urban regeneration in the surrounding towns. As a result, cities use the commercial activities of ports to develop commercial and craft activities at the level of residential units. This leads to the creation of organized commercial facilities and infrastructure. This process favors the development of port services, trade, administrative centers and neighborhoods, transforming these areas into centres of wealth and prosperity.

RESEARCH ELABORATIONS

This study examines the relationship between city and port, focusing on the case of Piraeus. The study is enriched by a comprehensive bibliography that primarily aids in establishing the theoretical framework that underpins the subsequent analysis of collected research data, and developing diverse methodological models, with a predominant focus on qualitative methods. It uses a multifaceted qualitative approach to analyze historical and contemporary data, international trends, and the potential for future development. The study analyses the current situation by involving a roundtable discussion with representatives from key organizations in Piraeus, yielding insights into factors affecting the city-port relationship. Also, a planning framework is created, including the construction and evaluation of future scenarios and the formulation of a Spatial Decision Making System.

The second part of the study involves an analysis of the current situation regarding the port and the city, coupled with the mapping of the development potentials in the Piraeus area, through participatory processes such as roundtable discussion. It also includes the creation of a planning framework that encompasses the construction and evaluation of future scenarios and

Received: 2022-12-01 Revised: 2023-02-09 Accepted: 2023-05-27 Published: 2023-08-31

the formulation of a Spatial Decision Making System. The methodological approach is mainly qualitative and is structured with particular dynamism, with emphasis on both historical and contemporary data analysis and recording, including future implications. Planning is carried out utilizing various criteria and perspectives, enhancing the study process and the resultant outcomes. This multifaceted approach strengthens the process of the study itself and the produced results. Moreover, it is crucial for the methodology employed in a scientific text to reflect a global character, combining various processes to achieve a more precise analysis of the individual issues and research questions. In terms of research methodology, the roundtable method, involving three representatives of decision makers for the city and port of Piraeus in a roundtable discussion was used. The three representatives responded to a series of questions in order to further investigate and verify the factors that affect the relationship between the city and the port of Piraeus, causing either development disturbances or development prospects. Through the qualitative analysis, 15 questions were answered by the selected organizations, leading to important findings and conclusions related to the topic under study. Furthermore, it is worth mentioning that the steps of the methodology can be replicated in other regions, resulting in more comprehensive findings and conclusions about cities, ports, the relationship between them and the future prospects. This possibility arises from the structure of the methodology which consists of discrete steps in the preparation and progress of the study, extending its relevance beyond the defined objectives.

RESULTS AND DISCUSSIONS

It is important to note that the development of commercial activity associated to the port also contributes to the urban upgrading of cities adjacent to ports (Chen & Lam, 2018). Consequently, cities tend to expand towards ports and builds on its commercial dimensions, while promoting and defining activities (trade/industry) in distinct regions. Essentially, the port becomes the official visual representation of the city. (Benevolo, 1997, p. 81). Also, a class-based social displacement or movement takes place, as self-contained commercial functions and market activities schematically force the more powerful and wealthy social groups to relocate around the port. As an example, the qualitative social status, prestige and economic influence of a family was reflected by their consumption of imported goods (Norcliffe, 1996). It is also worth noting that this social movement toward the port attracted various other trades (e.g. craftsmen of related trades such as blacksmiths, carpenters, dockers, builders, etc.), whose interest was tied to the ever-increasing commercial activity of the port, which was a key pole of employment/recovery. Also, crucial was the harbor's role in providing security to the inhabitants against external threats, like piracy. In such cases security was achieved through

Received: 2022-12-01 Revised: 2023-02-09 Accepted: 2023-05-27 Published: 2023-08-31

the fortification of the city. (Braudel, Aymard, & Coarelli, 1990, p. 157). However, the act of fortifying the city led to the isolation of its inhabitants, gradually affecting their mental framework of values and functioning, resulting in introversion. The walls of a city served as the entry point for both people and goods, resulting to tax collection practices. This fortification on the city limits also highlighted its military prowess and its status as a maritime centre/base, but also defined the spatial area where specific laws were upheld, ensuring civil rights and equality for its residents. Gradually, due to changing of social perceptions, the equilibrium was overturned and the relationship and the dichotomy of the city-manor were redefined, since fortifications were no longer meaningful or the walls were no longer the key urban characteristic of a city (Pinol, 2000, pp. 21-24).

Regarding port redevelopments, it is mentioned that the extensive urban vacancies created in port cities are undergoing regeneration and restoration by introducing new uses, like recreation, culture and tourism (Mould, 2014). These uses were consistent with business innovations and profitable activities, leading to increased job opportunities. Also, the city now is extending toward the waterfront, further integrating these new uses with existing residential infrastructure. Concerning the transformation of port cities toward the sea and the key role of the water element in relation to the city, it is worth noting that these redevelopments provide a significant advantage to the city, compared to competing port cities and mainland cities, as they establish a highly recognizable destination. As a result, the city is particularly attractive for the movement and establishment of commercial activities of particular importance (e.g. complex systems of multinational companies, banking institutions, businesses and offices) (Gospodini & Beriatos, 2006, pp. 71-72).

Finally, through regeneration and the implemented interventions, a global network of idyllic cities with significantly upgraded port infrastructure and utilization of the water element is being created. These cities fully align with the needs and objectives of the global economy. Cities now exhibit relative homogeneity in terms of water and waterfront management, applying different landmarks and/or uses to different landmarks as appropriate) (Norcliffe, 1996). In general, coastal frontage redevelopments have mobilized residents, businesses and central or local government (Bassett, Griffiths, & Smith, 2002). However, in some cases, sudden and out of touch changes with the environment have caught the city and its residents unprepared. Adapting to the new conditions and using the port areas can be challenging, because people tend to prefer the familiar city districts, streets and places. The environmental footprint of the way in which people use space is significant. The design of technical infrastructure plays a crucial role as urban planning can potentially lead to environmental degradation. A proper connection between the coastline and the city center is essential for proper integration.

CONCLUSIONS

Additionally, the analysis of different scenarios for implementing ISI investments and the PPA master plan for Piraeus indicates that these initiatives will lead to substantial economic and financial development, positioning Piraeus as a major competitor among European cities with ports and solidifying its role as a prominent maritime gateway for Greece, the Mediterranean, and the Balkans. The implementation of the ISI entails measures geared toward enhancing the urban landscape and promoting social unity by providing assistance to disadvantaged social segments. Conversely, the execution of the PPA masterplan, being a privately driven endeavor, seeks to modernize the port's infrastructure, amenities, and services, with a specific focus on commercial and economic outcomes. While this initiative will indirectly contribute to enhancing the residents' quality of life and the environment, its primary aim lies in bolstering commercial and economic performance. After evaluating the aforementioned scenarios, it becomes evident that both investments, ISI and Master Plan should be implemented in a combined manner. This approach, despite its associated high costs and potential challenges in terms of social acceptance, emerges as the most comprehensive and advantageous solution. The Combined Scenario not only addresses a wide range of objectives but also sets the municipality on a path towards a more promising future. It promises significant economic benefits and the potential for robust social development, making it the most favorable choice among the given scenarios.

ACKNOWLEDGEMENTS

Please acknowledge collaborators or anyone who has helped with the paper at the end of the text.

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Received: 2022-12-01 Revised: 2023-02-09 Accepted: 2023-05-27 Published: 2023-08-31

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