

Governance of Italian Cruise Terminals for the Management of Mediterranean Passenger Flows

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THE MAIN AIM OF THIS WORK is to understand how different port governance models could correspond to different information systems among the actors (i. e. Port Authorities, cruise terminal concessionary companies and others) of a seaport system. In order to analyse how the information about passenger flows is managed within ports characterized by different governance models, the study focuses on the information system used by concessionary cruise terminal companies to collect, elaborate and report data to the Port Authority. This is an explorative study conducted through a qualitative approach and the use of case study methodology. The cases analysed are four Italian concessionary cruise terminal companies.

INTRODUCTION

Since 25 years the cruise industry is continuing to grow, despite the world economic crisis (Hobson 1993; Cartwright and Baird 1999; Dickinson and Vladimir 2008; Di Vaio, Medda, and Trujillo 2010).

The increasing dimensions of the ships have contributed to this growth, because it allowed the cruise companies to satisfy new consumers' needs with more elaborated amenities and facilities (Wild and Dearing 2000).

An analysis of the overall cruise international demand from 1995 to 2000 reveals an increase by 70% and almost the same increase has been registered from 2000 to 2008. North America remains the main demanding area, even though in the last decade its weight on the total demand decreased, while the Mediterranean's cruise demand gradually increased (European Cruise Council 2007; 2009; CLIA 2010) (figure 1).

Looking at Europe, according to the European Cruise Council

[120]

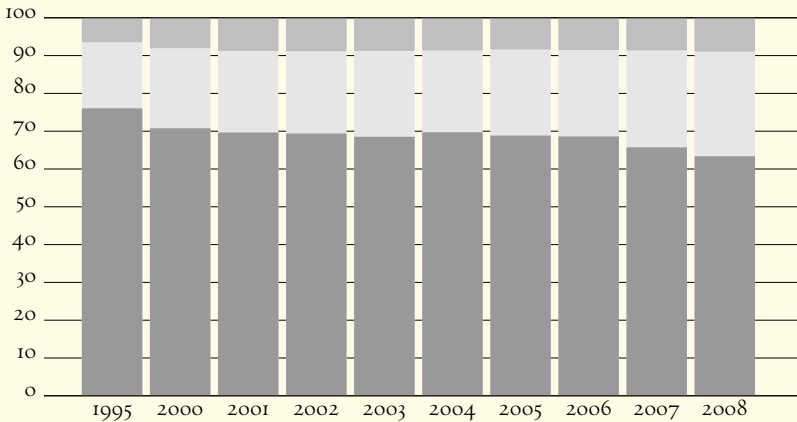


FIGURE 1 The demand for international cruising (1995–2008, dark gray – North America, light gray – Europe, gray – rest of the world; in percent)

(2007; 2009) data, the cruise passenger flows concerned mainly some Mediterranean ports such as Barcelona, Civitavecchia, Naples, Palma de Majorca, Venice and Savona; in the North Europe area, instead, the main attractive ports have been Southampton and Copenhagen. In particular, in 2008 the cruise passengers that embarked from European ports have been about 4.7 millions, of which 1.7 millions embarked from Italian ports (Civitavecchia, Venice and Savona) placing Italy as first in Europe and in the whole Mediterranean area, while more than 1 million passengers embarked from the main Spanish ports (Barcelona and Palma de Majorca), placing Spain as second. Finally, the ports of Southampton and Dover place UK as third country for its embarked passenger quantity (tables 1 and 2).

With reference to the type of traffic handled into ports (embarked, disembarked and in transit) it is possible to distinguish the ports in *home port* and in *transit port*. In the first case, the flow of passengers embarked and disembarked outweighs the transit passengers. In the second case, the transit flow is prevalent.

Following these criteria Barcelona, Civitavecchia and Venice are considered as the main *home* ports in the Mediterranean area; Naples and Livorno instead, as they are interested by considerable flows *in transit* (more than the 80% of the total flows), are classified respectively as first and second *transit* or *call* ports (table 3).



TABLE 1 The number of passengers in the main cruise ports in the Mediterranean area (2008)

Port	Embarked	Disembarked	Transit	Total
Barcelona	573	571	926	2,070
Civitavecchia	500	500	819	1,819
Naples	72	72	1,093	1,273
Palma de Majorca	300	300	531	1,131
Venice	530	530	205	1,265
Savona	309	306	157	772

[121]

Values are in thousands. Based on data from ECC 2009.

TABLE 2 The number of passengers in the main cruise ports in the Northern Europe area (2008)

Port	Embarked	Disembarked	Transit	Total
Southampton	485	485	1	971
Copenhagen	157	154	244	556
Lisbon	21	21	366	408
St Petersburg	0	0	395	395
Tallinn	0	0	377	377
Stockholm	20	20	243	363
Helsinki	20	20	320	360

Values are in thousands. Based on data from ECC 2009.

In particular, the Italian ports in 2008 have been the main destinations of the Mediterranean with almost 5 million passengers. Looking at the other main destinations in the Mediterranean, Greece is the second in the ranking with its 4.3 million of passengers, concentrated mostly on the islands of Santorini, Mykonos and Rhodes (European Cruise Council 2009), followed by Spain and France, with their respectively 3.6 million and almost 1.8 millions passengers (European Cruise Council 2007; 2009).

At the same time, over than 150 cruise ships sailed the Mediterranean coasts with an average of 1,049 calls per ship. The cargo potential of these ships assets amounts to 3.14 million passengers, so that the whole capacity is 25.33 million *passengers per night*, with an average stay on the ships of 8 nights (European Cruise Council 2009). Obviously, the

TABLE 3 The main cruise ports in the Mediterranean (2008)

Ports	2006	2007	2008
Naples (Italy)	971,874	1,151,345	1,237,078
Livorno (Italy)	607,848	713,144	850,000
Nice/Villefranche/Cannes (France)	625,016	559,411	761,200
Valletta (Malta)	408,264	487,817	556,861
Marseille (France)	380,000	434,087	540,000
Palermo (Italy)	320,632	471,395	537,721
Bari (Italy)	303,338	351,395	465,739
Limassol/Lamaca (Cipro)	448.815	427,408	376296
Messina (Italy)	253,462	291,296	366,337

Based on data from ECC 2009.

choice of cruise companies to include a port in their routes depends on several factors. The mild weather and the attractiveness of cities placed on the coasts are among these. As matter of fact, the mild and stable temperature of Mediterranean area and the yearly and monthly limited weather ranges, favor the use of ships also for eight months a year, allowing the optimization of ship-itinerary combinations. Further elements that influence cruise companies' choices about destinations are the natural, artistic and cultural resources of towns surrounding ports and the existence of airport and train hub networks (Cottam, Roe, and Challacombe 2007; Soriani et al. 2009).

The technical handling capacity of cruise infrastructures and the services supplied to ships and passengers represent other relevant elements that influence the decision on including a port in their own routes. This capacity is often inadequate so, in recent years, the cruise companies have started to invest in the companies that manage port infrastructure by concession. This trend is confirmed by an analysis on some Mediterranean ports (Di Vaio, Medda, and Trujillo 2011), that shows the growing presence of cruise companies in the ownership structure of cruise terminal concessionary companies, in order to control directly the passenger flows.

This phenomenon is favored by the seaport reordering reforms introduced in many European countries that encourage private investments in port infrastructures. The attraction of private investments is



aimed at improving the efficiency and quality of services supplied (The World Bank 2004).

In Italy, the re-ordering Law no. 84 of 1994 (articles 16 and 18) allocates the concession of activities and port functions to private operators. This configures an organizational model known as *the landlord model*, where the Port Authority has regulatory, coordination and control functions, while the port operations are carried out by private operators with the goal of increasing the passenger flows. However, the law fails to specify the nature of concessionary company ownership and this implies that in the absence of private operators the shareholders are public entities or the Port Authorities. [123]

In other cases, the absence of a clear rule, has led to the creation other governance assets, where the concessionary company ownership is shared between public entities (i.e. Port Authorities) and private operators, and other cases where the ownership is concentrated in the hands of private operators, such as the cruise companies.

This means that a port configures a multi-actors context with different interests that need to meet the main aims of a port, which are: the profitability of infrastructures, related to the quantity of passenger flows managed, and the satisfaction of public interest, related to the sea-transport service itself, the employment of workforce and the development of business economies in the surrounding areas. This requires, among others, the implementation of an integrated information system, seen from both technical and informative profile, able to connect all the actors involved, thus reducing information asymmetries.

So in this context, the aim of this paper is to analyse how different port governance models could correspond to different information systems. In order to verify this aim, we need to investigate, on one hand, the main variables of the governance assets of cruise terminal companies, that is the ownership structure and its stability during time and, on the other hand, the information technologies implemented to measure the passenger flows. In particular, we need to identify the information tools, the content of information flows exchanged and the actors involved in the three phases of handling information on passenger flows (ship agents, cruise companies, terminal concessionary com-

pany and the Port Authority). In the literature, the studies on these arguments are scarce, and this study can contribute to extending the knowledge on the dynamics of governance acting within concessionary companies after the re-ordering law.

[124] For this study, we used the purposeful sampling method, selecting four cruise terminal concessionary companies that manage the infrastructures of the most relevant Italian ports, in terms of passenger flows. The paper is divided into six sections. After this introduction, in the second one the port organization models after the reforms are described. In the third section, the attention is focused on the governance of cruise terminal companies and the role of information tools for handling and managing the passenger information flow in order to support decisional processes of concessionary companies and Port Authorities. In the fourth section the criteria of selection of case studies have been described. In the fifth section, the role of IT for the management of information flows phases is explained: data collection (relationship between ship agent and/or cruise company and cruise terminal company), elaboration (relationship between departments of the cruise terminal company) and the reporting (internal and external). Finally, in the last section we evidence the results of the study and the managerial implications.

PORT ORGANIZATIONAL MODELS

The management of a port requires the execution of many activities and functions, and according to how these functions are shared among the actors and to the degree of involvement of private operators, different organizational models are figured out.

In the literature, some authors such as Baird (1995), Liu (1995) and Baudelaire (1997) refer to three organizational models, 'service ports, tool ports and landlord ports', as also indicated by The World Bank (2004); while, according to Goss (1986), Heaver (1995) and De Monie (1996) there are two models: 'landlord port and service port,' as the 'tool port' would represent only a variant of the landlord port (Cullinane and Song 2001).

These models are characterized by a number of variables such as: the subject to which the service is contracted (public, private or mixed); the strategic orientation (local, regional, global); the ownership of the



TABLE 4 The landlord model

Port functions	Public/private	Private/public
Regulatory	Public	Public
Landowner (or Management)	Public	Private
Operations	Private	Private

[125]

Adapted from The World Bank (2004).

infrastructure (including the port territorial area); the ownership of the superstructure and equipment; the management of the quays and so on (The World Bank 2004).

Therefore, according to The World Bank (2004), the port organization models can be distinguished as follows:

- *Service port model*, when the Port Authority owns all infrastructures and is responsible for providing all the port services;
- *Tool port model*, when the Port Authority owns the infrastructure and superstructure and the services are provided by private operators;
- *Landlord port model*, when the Port Authority provides the infrastructure, while the investments in the superstructure and port operations are contracted out to private companies;
- *Private port model*, when all the equipment and services are owned and managed by the private sector, implying the transfer of port area ownership and all facilities to the private sector.

Although these models find confirmation in several theoretical and empirical studies (Baird 1995; Cullinane and Song 2001; Cullinane and Wang 2005, Di Vaio, Medda, and Trujillio 2010), in practice we may have hybrid organizational forms, related to different contexts and needs, or to the fact that the law fails to define precisely the role that private operators have to play.

In particular, we focus on the *landlord model* (table 4), that characterizes Italian sea ports. In this model, the Port Authority endows the landowner (or management) and regulatory functions, while the operation functions, which concern the physical transfer of goods and passengers between sea and land, are in the hands of private operators (The World Bank 2004).

However, some empirical evidences (Di Vaio, Medda, and Trujil-

[126]

lio 2011) show that the management function of infrastructures can be played also by private operators. In particular, in Italy, some cruise terminals' infrastructures are managed by concessionary companies, whose ownership can be public (i. e. Port Authority, Chamber of Commerce) and/or private (i. e. cruise companies that in this way can directly control passenger flows).

In this scenario, what distinguishes one port model from another is the ownership of companies to which the Port Authority contracts out the management of infrastructures by concession. So, according to the role that public and private subjects can assume in the ownership structure of cruise terminals concessionary companies, in this study we identify different governance models:

- 1 *Public governance model*, when the ownership is exclusively public;
- 2 *Public/private governance model*, when the ownership is mostly public;
- 3 *Private/public governance model*, when the ownership is mostly private;
- 4 *Private governance model*, when the ownership is exclusively private.

This means that the Port Authority, apart from playing regulatory and coordination functions, in some cases may be the owner and top manager of the concessionary company, while in other cases the Port Authority is a small shareholder with scarce influence on board decision and, finally, in other cases the Port Authority may have no participation in the equity capital, excluding any kind of decisional power in the concessionary company. At the same time, private subjects, such as cruise companies, can assume a relevant or marginal role in the management of port infrastructures, according to the relevance of capital shares they own.

GOVERNANCE AND IT IN TERMINAL CRUISE COMPANIES

In order to improve the efficiency of port systems, the reordering Law n. 84/1994 has created the conditions to contract out the management of infrastructures to private operators, until the Port Authorities from being the land-manager become the buyer of services provided by



concessionary companies. In function of this, the relation between the Port Authority and the concessionary company sets up an agency relationship, where the concessionary company has the task of increasing passenger flows, while the Port Authority has to control the activity contracted out, apart from promoting the port destination.

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In order to achieve this aim, the implementation of a valid information system is useful to support the strategic decisions of the Port Authorities about investments and the activity of control mentioned above. The concession of management functions to external providers is a decision that needs to be coherently and adequately supported by valid information systems, because it can create the conditions for information asymmetries.

In the last years, with the growth of passenger flows in the Mediterranean area, actors involved in the governance of port systems have been dealing with huge internal and external information flows that make decisional processes difficult.

This activity could be facilitated by the application of more accessible and integrated information technologies, whose implementation reduces the time needed to elaborate information useful to support the internal management and to improve the efficiency and accuracy for external reporting. So the large application of IT could become essential for the fast and accurate elaboration and transfer of enormous volumes of data inside port organizations, allowing the Port Authority managers to recognize the problems and act more rapidly (Fernandèz-Alles and Valle-Cabrera 2006).

New information technologies could allow the Port Authority to have advanced reporting systems that contain in one database all data, coming from different sources, obtaining in this way more rapid, simple and useful information. There are several differences between static (or separated) information systems, such as excel spreadsheets, and dynamic (or integrated) information systems, where the information needed is available in real time and the traceability of data is complete (Rom and Rohde 2007; Kia, Shayan, and Ghotb 2000; Lee-Partridge, Teo, and Lim 2000).

However, the theoretical assertion of these positive effects does not lead automatically to its implementation, considering the high costs

and acceptance resistances to the introduction of new technologies (Granlund and Malmi 2002).

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Therefore, in order to reduce information asymmetries, it is necessary to implement an information system able to guarantee access to the 'continuous flow of selected, elaborated and integrated information' that, on one hand, allows an increase in the 'rationality of internal decisional process,' while on the other hand, it should allow transfer of the information to the Port Authority for complying with the contractual obligations and eventually to other external stakeholders' informative needs.

METHODOLOGY

The research has been conducted through the case study methodology. The criteria that have been followed for the selection of case studies are:

- 1 The relevance of passenger flows handled by the concessionary cruise terminal company;
- 2 The ownership structure of companies to which the management of infrastructure has been contracted out;
- 3 The stability of ownership structure.

With reference to the relevance of passenger flows, we distinguished the *home* ports from *transit* or *call* ports; to analyze the ownership structure, we selected the concessionary companies characterized by the main governance models as explained in the previous section, and that had a stable structure in the last three years.

The concessionary companies selected are:

- Venezia Terminal Passeggeri SpA (VTP) and Porto di Livorno 2000 Srl (Livorno 2000), respectively home and transit ports, whose ownership can be assimilated to a *Public governance model*. In particular, from the ownership structure analysis results it can be seen that these companies, though their juridical status is private, are mostly or completely owned by public entities. For example, one of the shareholders of VTP is APV Investimenti SpA, which is completely owned by the Venice Port Author-



TABLE 5 Ownership structure of VTP and Livorno 2000 (public governance model) (2006–2008)

VTP		Livorno 2000	
APV Investimenti SpA	35,50%	Port Authority	73,08%
Chamber of Comm. Venice	2,50%	Chamber of Comm. Livorno	26,92%
Finpax Srl	21,00%		
SAVE SpA	21,00%		
Veneto Sviluppo SpA	17,50%		
Venice Municipality*	2,50%		

* From July 28th, 2008 the share has been sold and distributed among Chamber of Commerce Venice (2.60%), Finpax Srl (22.18%) and SAVE (22.18%). Based on data provided by the Chamber of Commerce and individual concessionary companies.

[129]

ity, while the other private companies are owned by public subjects. The Port Authority of Livorno is the majority shareholder of Livorno 2000, while the remaining equity is owned by the Chamber of Commerce of Livorno, another public entity. The ownership structures of VTP and Livorno 2000 identify different organizational models, according to the (direct or indirect) participation of the Port Authority in the ownership structure of cruise terminal companies (table 5).

- Terminal Napoli SpA (TN) and Roma Cruise Terminal Srl (RCT), respectively *transit* and *home* ports, whose ownership structure configures a *Private/public governance model* for TN and a *Private governance model* for RCT. TN is almost completely privately owned (95%): the 45% of its equity is in the hands of cruise companies (Costa Crociere SpA, MSC Crociere SpA and Royal Caribbean Ltd) and 20% is owned by Marininvest Srl (it is the financial holding of MSC Crociere SpA). The ownership of RCT, instead, is equally shared between two cruise companies (Costa Crociere SpA and Royal Caribbean Ltd) and Marininvest Srl (table 6).

To collect data for our study we conducted interviews and submitted semi-structured questionnaires to managers that handle and use data on passenger flows (accounting manager, commercial managers, general directors and the board).

TABLE 6 Ownership structure of TN (private/public governance model) and RCT (private governance model) (2006–2008)

TN		RCT	
Alilauro SpA	20%	Costa Crociere SpA	33,33%
Costa Crociere SpA	20%	Marinvest Srl*	33,33%
Intership Srl	10%	Royal Caribbean Cruise Ltd	33,33%
Marinvest Srl	20%		
MSC Crociere SpA	5%		
Royal Caribbean Cruise Ltd	20%		
Port Authority	5%		

* Marinvest Srl is the holding company of MSC Crociere SpA. Based on data provided by the Chamber of Commerce and individual concessionary companies.

The questionnaire was articulated in three sections, one for each phase of the information management process (collection, elaboration and internal/external reporting). The questions were aimed at investigating the following aspects: the actors involved and the function they play; the nature and quantity of data elaborated; technologies used; the procedures employed; the frequency and timing of operations; the integration degree of information exchanged between the concessionary company and Port Authority. The questionnaire was submitted by phone to accounting and sales managers, while some CEO members were interviewed face to face.

CASE STUDIES

VTP and Livorno 2000, whose ownership and management is 'completely' public, present different degrees of automation of the several steps that characterize the passenger flow data management function.

VTP's infrastructures are employed only for cruise flows, while the Livorno 2000 infrastructures are also used for ferries flows, operated by the same concessionary company.

As evidenced in table 7, in the first phase VTP passenger flow data are collected by clients (ship agents or cruise companies) with the support of a general accounting software platform, named AS400 (IBM), into which the agent periodically enters the passenger flow data.

The software interface enables the ship agent to enter data about



TABLE 7 IT for the support of data handling on passengers flows

Phase	Information Flow (actors)	Concess. comp.	IT tools	Information
1 Data collection	From ship agents or cruise companies to CTC	VTP Livorno 2000 TN RCT	Accounting Software (AS400) E-mail or fax to Acc. Dept. E-mail or fax to Acc. Dept. E-mail or fax to Acc. Dept.	Pax and ships number; time (arrive, departure); other ship information (i. e. tons); other accounting information
2 Processing	From Acc. Dept. to Sales Dept. (other departments) by CTC	VTP Livorno 2000 TN RCT	AS400 multi access (GD, administrative, IT, sales, technical, security, armament) Excel sheet Excel sheet Excel sheet	Reports (statistic data – variation percentage (monthly, three monthly, yearly), graphs, incidence)
3 Internal reporting	From Sales Dept. to Board by CTC	VTP Livorno 2000 TN RCT	AS400 multiaccess – monthly or according to need (AIS: direct access) Via e mail and hand delivery – monthly or according to need Via e mail and hand delivery – monthly or according to need Via e mail and hand delivery – monthly or according to need	Reports
External reporting	From CTC to PA	VTP Livorno 2000 TN RCT	Logis – direct access – monthly Via e mail and hand delivery – monthly Via e mail and hand delivery – monthly Via e mail and hand delivery – monthly	Reports Reports and accounting schedules

Based on data provided by the concessionary companies.

[132] services demand, number of transit passengers, number of home passengers (embark and disembark passengers) and other information related to the docking of ships (i. e. number involved, name of ship, vessel size etc.). The data collected are used by VTP for invoicing (passengers, berths, etc.) the services supplied to clients.

In the Livorno 2000, instead, these data are received via email or fax and reported by employees in a software for management accounting. This program is used by the terminal company to invoice and apply the fares to the ship agent or cruise companies.

These collected data are then elaborated. In this second phase the software used by VTP allows multi-access from its departments (administrative, technical, sales & marketing, operational, security). The software is useful also for statistics elaborations on the passenger and ship flows, but it is not possible to distinguish from data collected the passenger flows of each of the VTP infrastructures (i. e. terminals no. 103, no. 107/108, no. 117, San Basilio 1 Isonzo and Riva Sette Martiri quay). This impacts negatively on the usefulness of these data for the support of VTP management decisional processes, because they are not able to measure the 'performance' of each infrastructure. The software for management accounting of Livorno 2000 allows users to extract some useful information, such as trends during time, incidences, average values and so on. In both terminal companies the collected data are substantially quantitative. After their elaboration, data on cruise passenger flows are transferred to cruise company management (internal reporting) and Port Authority (external reporting) (third phase).

In VTP the internal reports are automatically generated and all information is transferred electronically. In Livorno 2000, instead, managers export data from the software into excel sheets that are transferred to the head office. Regarding the external reporting to the Port Authority the two companies have instead a different degree of automation of their information systems. VTP transfers its data to the Venice Port Authority through an integrated information system named Logis (Logistics Information System). The software is based on a document workflow system implemented by the PA that permits the transfer of statistics in real time and for users to have information on pas-



senger flows any time they need and without mistakes or incongruities. The system is also able to collect information on other sectors of the maritime industry. It is a web-based application that, by using a standard internet browser such as Internet Explorer and Mozilla Firefox, allows accredited users (shipping agency, terminal operators, etc.) to send data online to all requiring offices (Port Authorities, Police Offices, etc.). In summary, the implementation of this system allows for informatization of all material data exchange processes between the Port Authority and the other actors of the port, improving the quality of information flows and creating an integrated 'seaport system.' Livorno 2000, instead, monthly transfers its reports on excel spreadsheets via email or fax to the Port Authority. The data transferred are then aggregated to measure the total flow of cruise passengers in the seaport of Livorno. Unlike the VTP, Livorno 2000 has not implemented a program of integrated information system.

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The information and communication processes, organizational and operational procedures and planning and control systems of TN and RCT, whose management is mostly or exclusively private, instead, have an almost similar level of automation.

TN's infrastructures and RCT's infrastructures are employed only for cruise flows.

As evidenced in table 6, in the first phase (data collection) the procedures and the degree of automation are mostly the same as in the two previous cases.

In the second phase, the data are processed and in RCT they are elaborated by an accounting software, while in TN the data are elaborated by the commercial department though excel spreadsheets.

In the third phase, the two cruise terminal concessionary companies follow different procedures. The TN commercial department transfers every month (via email) statistics reports to the General Director, the General Coordinator and the administrative manager, who subsequently transfer them to the Board. In RCT, monthly via e mail, the General Director receives from accounting department the statistics reports. After the transfer of data on passenger flows, TN Board may assume only operative decisions on the optimization of cruise flows. The strategic decisions on the traffic increase are assumed by other

authorities (regions, municipalities) and the Port Authority. The RCT board, instead, is able to decide how to increase passenger flows and the productive capacity of the terminal.

[134] With reference to data transfer to the Port Authority, both the concessionary companies employ the same procedures and the same automation tools. TN transfers (every month and via e-mail) the statistic reports to the Port Authority, which aggregates data elaborated by the berths managed directly by the Port Authority. These two terminals periodically transfer to the Port Authority's administration also a list of values billed and payments received for the security rights. TN also sends to the Port Authority the accounting schedules.

We can observe that the information system on cruise passenger flows for these two cases is automatized, but it is not integrated.

CONCLUSIONS

This paper contributes to the existing literature by investigating and relating new variables that have still not been considered up to now in cruise terminals management.

The analysis of case studies evidenced how different organizational models are associated with different informative systems (integrated or not). The organizational models, thus, tend to influence the cruise passenger flows management and the integration and automation of information systems that support the cruise terminals' governance and the Port Authority decision making processes.

The results, in fact, show that when the concessionary company is completely or mainly owned by cruise companies the increase of passenger flows is strictly related to the attraction capacity of cruise companies' routes. Moreover, in this case the information system used for the collection, elaboration and transfer of data is not integrated under the technical profile, and the access to information by the several actors involved in the process is not so easy and immediate.

When the concessionary company, instead, is completely or mainly owned by the Port Authority, the implementation of an integrated information system seems to be encouraged by the public actor itself, allowing the user to improve the timeliness and quality of data. In particular, comparing two cases where the public ownership is pre-



dominant, it is evident that the integration of information systems is higher in VTP, whose ownership is in the hands of a special purpose company completely owned by the Port Authority.

Furthermore, although the Law 84/94 assigns to private operators the goal of increasing the passenger flows and of carrying out port operations such as cargo handling, leaving to the Port Authority only regulatory, coordination and control functions the cases analyzed do indeed show the role of private companies is limited to investing in specialized infrastructures, without any involvement in decisional processes.

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However it is important to consider the main limitations of this paper. First at all, the paper is based only on four cases and the data are qualitative, so the results can not be considered extendable. Secondly, we considered only the ownership structures of a concessionary company, while other relevant variables could influence the decision on implementing integrated information systems.

Future empirical researches have to be conducted to investigate how the two variables 'public/private ownership' and 'integration of accounting information systems' are correlated.

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